VOLUME XVII NUMBER 4

THE ELEMENTARY SCHOOL JOURNAL

CONTINUING "THE ELEMENTARY SCHOOL TEACHER"

DECEMBER 1916

EDUCATIONAL NEWS AND EDITORIAL COMMENT

St. Louis Votes Bonds for Schools

St. Louis voted three and a half to one in favor of school bonds to provide new buildings. It has been pointed out in this *Journal* in reporting the organization of the St. Louis Survey that the school board of that city was facing a shortage of funds which endangered the efficiency of schools. The officers of the school system laid their case before the city. They accepted without hesitation the suggestion that a survey be made in order to add the testimony of outsiders to their own that the schools were well organized and doing good work. The whole matter of school support has been earnestly and fully discussed. The officers of the system believe that the public interest in education which has been cultivated during the campaign is one of the most important gains in the whole movement. The teachers have been a part of the organization in getting the matter clearly before citizens. The result shows that the citizens want good schools and are willing to pay for them.

Educational Campaign

The campaigns in Minneapolis and St. Louis, both of which have brought enlarged resources to the schools, prove that there is one best way to overcome the present serious crisis in school finance. There should be in every city an open discussion of all school matters, with a full statement of policies and present achievements. The old-fashioned town

meeting voted money to schools when the need of money was made apparent to all the citizens. Unfortunately it is not easy in these days to get into communication with all the people in a city. For some time past, school officials have accepted as inevitable the separation of schools and their constituents. These campaigns show that a new day has come, one in which new methods of spreading information about schools can be devised, such as are very welcome to citizens.

A Weak School Board and a Strong Superintendent

One of the most notable victories of a school superintendent who has steadfastly refused to be subordinated to a political board was won by Superintendent Chadsey in Detroit on November 7. By an overwhelming vote in which the majority was five to one, the citizens of Detroit abolished the large board of twenty-one members elected by wards and substituted for it a small board of seven members elected at large.

The city of Detroit has an organization which tends to emphasize as much as anything possibly can the political character of all of its governing bodies. The wards of the city of Detroit are narrow strips of territory running across the whole city. Each ward officer of the city government thus has contact with the business section and with the residence section. Heretofore the members of the school board have been elected by wards. They have been dominated by political motives to an extent which has made them notorious. Mr. Chadsey has for a number of years appealed directly to the public when he could not secure through this political board school legislation that he needed to improve the system. The climax came, very fortunately, just before the vote on the referendum for a small board. Mr. Chadsey was opposed to the action contemplated by the board in appointing two principals. In order to make his attitude perfectly clear, he read to the school board at its meeting immediately before election the following statement:

> The majority report of the Committee on Teachers and Schools recommending the appointment of Mr. Garfield A. Nichols as principal of the Berry School makes necessary a definite statement from the superintendent concerning the principles at issue in this matter. The rules of the Board of Education now in force make necessary for eligibility for appointment to the rank of

elementary teacher the possession of a diploma of graduation either from the University of Michigan, the State Teachers' College of Michigan, or a diploma from a state normal school or a college or a university of equal rank with the University of Michigan, or a diploma of graduation of the Martindale Normal School, or the possession of a Michigan State Life Certificate. It would seem to follow as a matter of course that in considering the question of the promotion to the rank of principal of an elementary school, the educational qualifications of the candidate should be one factor. It would also seem to follow that an elementary-school principal should be able to be the leader of his teachers and should be respected by the teachers as at least their equal, if not their superior, in educational qualifications. Mr. Nichols has no academic training beyond that given in the Detroit high schools, and became a regularly appointed teacher before the present eligibility rules went into effect. There is, therefore, no question as to the legal right of the Board of Education to promote Mr. Nichols. There is, however, in my judgment, a very decided reason for objection to the advancement from the rank of a teacher to that of a principal of one whose qualifications are not such as to make him eligible for teaching in the elementary schools were he not already in the ranks. I am anxious to have it clearly understood that in this statement no objection to the advancement of Mr. Nichols is made on the ground of inability satisfactorily to perform the duties of a principal. Mr. Nichols' record as a teacher is satisfactory and I do not question his administrative ability. The entire question hinges upon the impropriety of an action which, in effect, says to the teachers of Detroit, Your educational qualifications are not under consideration in cases of advancement to positions of higher responsibility.

The majority report of the committee also makes pertinent a criticism of the present rules of the Board of Education which seems to me to be most justifiable. Under the present rules, the superintendent has absolutely no power in connection with the nomination or appointment of teachers or other officials, save advisory. Inasmuch as the superintendent is both by the Board of Education and by the community held responsible for the efficiency of the school system, it follows that he should be free to nominate, not merely the teachers, but all his official subordinates, otherwise he may find it difficult to carry out effectively his policies. It is from my point of view perfectly proper for the Board of Education to retain the power of confirmation of appointments, but the power of nomination should rest with the chief executive of the school system.

The real significance of this statement comes out in the following editorial published by the *Detroit Free Press:*

WHY YOU SHOULD VOTE FOR A SMALL SCHOOL BOARD

In deciding whether to cast their ballots in favor of the installation of a small school board of seven members to be elected at large, voters will do well to consider that conditions on the board as at present constituted could scarcely be worse or more hopeless. Any change must be for the better.

Among the inspectors today—there are one or two exceptions—there is an almost total absence of any intelligent interest in educational affairs. For years the welfare of the pupils and the development of an effective teaching corps and of effective teaching methods have been questions of secondary consideration with the board members; but of late the apathy has become appalling. When the superintendent makes his annual report, a little cursory interest in proceedings is exhibited, but otherwise the inspectors listen to Dr. Chadsey only perfunctorily, if they listen at all. Their interests, their small talk about the board rooms, the things over which they are anxious, all have a political, and mostly a petty, selfish complexion. The public-school system may go hang; or if its interests clash with theirs, it may go to perdition.

An illustration of this general attitude of the board was provided at the last meeting of the body. Two teachers had been recommended by the committee for promotion to principalships. One was Garfield Nichols, slated to be given charge of the Berry School; the other, Miss Alice Donovan, selected to be head of the Stephens Annex. Superintendent Chadsey objected to the appointments on the ground that the instructors were not educationally qualified under the rules of the board, and he argued strongly that the contemplated action would be a detriment to the Detroit school system and an injustice to himself as its head. Of all the inspectors present at the meeting only one, S. C. Mumford, supported the superintendent. The remainder voted to confirm the appointments over Dr. Chadsey's head.

The *Free Press* has it on excellent authority that the situation stood about like this: Garfield Nichols is a son of Arthur Nichols, a Detroit public-school principal whose political activities, sometimes in defiance of board rules, have been something to be reckoned with. As one man in touch with the situation puts it, "Nichols is some punkins in the political field." During this campaign he has been working hard for the retention of the large school board. Some of the inspectors formerly were his critics and enemies, but they want to keep their jobs, and they have been glad of his aid at this juncture. Old scores have been forgotten, and the hatchet buried. When Nichols appeared at the board offices lobbying for his son, the inspectors listened gladly. They preferred his extremely practical political arguments to the plea of the superintendent for the welfare of the educational system.

Nichols accordingly was rewarded for his work in a political way by the appointment of his son to a place for which, under the rules of the board, the young man was not qualified. He was aided in his efforts by the circumstance that Inspector Hely, a candidate for the job of alderman from the Thirteenth Ward, saw some campaign advantages to himself if he could secure the promotion of Miss Donovan. There was a deal, Hely supporting the Nichols forces in return for the confirmation of Miss Donovan as principal at the Stephens Annex. It seems obvious that if the members of the school board have reached a depth of degradation where they are willing to sacrifice the educational system in order to keep themselves in office, it is full time they were legislated

out of office. Someone may suggest that another remedy for the existing condition might be the election of better ward inspectors. Well, efforts to that end have been practically continuous for more than twenty-five years and the situation today is worse, much worse, than at the beginning.

As stated above, this incident was followed by the casting of an overwhelming vote in favor of Superintendent Chadsey. In commenting on this situation one cannot refrain from calling attention to the fact that there are undoubtedly many situations in the United States where bold and fearless policies such as that adopted by Superintendent Chadsey would bring public approval. A weaker superintendent might have acquiesced in the action of the board on the ground that the board is the body representing the city. Many a superintendent allows himself to fall into the fallacy of assuming that it is his duty to recognize the will of the people as recorded by the board of education. So long as superintendents are willing to acquiesce in unwise action by the board, the public will remain ignorant of the needs of their educational system. It is only when a clear and definite statement is given of educational issues that the people know how to exercise their influence in the conduct of school affairs. The example of Mr. Chadsey and of the city of Detroit furnishes a welcome relief to the student of education from the rather monotonous picture which is presented in municipality after municipality, of acquiescence of superintendents in the weak policy of submitting to an ignorant and inefficient board of education.

Junior High School in Philadelphia

The junior high school always encounters a serious obstacle in the attitude of elementary-school principals. An example of this is found in the following item clipped from the *Inquirer* of Philadelphia, referring to the inauguration of the junior high-school experiment in that city:

> As an experiment, the Committee on Elementary Schools yesterday decided to recommend to the Board of Education a concentration of seventh- and eighth-grade pupils in one case in each of the ten school districts, provided such arrangement shall in no case displace any school principal.
>
> The form of action permits Superintendent John P. Garber and Chairman William Rowen of the committee to select the ten schools for the experiment, which is to be an extension of the plan that has been tried for six months at the Blaine School.

Superintendent Garber recommended thirty-two centers, but the committee found itself so much divided that it was unwilling to make a wholesale change until the system had been tested.

In answer to a question from John Wanamaker, Dr. Garber said that some of the principals feared that their schools would be lowered in rank and prestige by the decapitation of the seventh and eighth grades, and Simon Gratz and Avery D. Harrington strongly shared in this view. The latter said that school principals had made objections to him, while saying that they could not afford to express public opposition to the recommendation of the department of superintendence.

The cure for the dissatisfaction of elementary-school principals should be sought and can be found in a concentration of attention on the pressing needs of Grades IV–VI. These grades have not been adequately organized in times past. The teachers in these grades have been the new and inexperienced teachers of the system, as contrasted with the primary teachers on the one hand and upper-grade teachers on the other. Non-promotions have been high. Drill has been regarded as the chief function of the grades, while the heavy withdrawal of pupils has given clear evidence that the pupils need something that is vital and attractive. Let elementary principals attack these problems and they will not miss their seventh and eighth grades.

Other Junior High Schools

Other news items from Joliet, Illinois, and Mount Vernon, Ohio, show that the junior high-school idea is spreading. In the latter city the superintendent has introduced the matter at a board meeting and the problem is being fully discussed. From Joliet comes the following item, which shows one conception of what such a school is:

Prophecies that the new F. E. Marsh School would develop into a junior high school, or into a building for domestic science or manual training, were made at a special meeting of the city school board yesterday afternoon.

Inspector J. Frank Whallon declared that the time was coming when this new school, designed as one of the east-side centers, would pass from the ranks of the grade schools and be devoted to a higher course of training. Superintendent Stoops said that the building could be very rapidly adapted to either domestic science or manual training.

The Board of Education of Decatur, Illinois, has adopted a revised set of rules and has printed these in a pamphlet so that any-

one who is interested can conveniently find out about the relations of all the school officers. The most interesting single item in this new set of rules can be brought out by stating that the board has moved very far in the direction of organizing a one-headed system with unified authority for all matters centered in the office of superintendent. It was pointed out in an earlier number of the *Journal* that the Board of Education of Decatur was making a careful study, under the lead of the superintendent, of the financial affairs of the system. As in many other cities, so in Decatur the board found that its finances need careful attention. The centralizing of the system is absolutely essential if economies are to be effected as completely as possible.

Reorganizing a School System

The following extracts from the new rules emphasize the new type of organization on matters of finance and material equipment:

> The Superintendent shall be the executive officer of the Board. To him shall be committed matters of instruction, discipline, and the general management of the schools. His shall be the duty of co-ordinating and harmonizing the work of the employees of the Board in every department of the system of schools, both educational and business. . . . . It shall also be the duty of each other teacher or officer in the school system to co-operate with the Superintendent and furnish him any information or reports which he may require. . . . .
>
> He shall recommend all appointments of teachers, principals and supervisors, and shall assign teachers their respective positions, and duties, and transfer principals and teachers whenever in his judgment the best interest of the schools will be served thereby. . . . .
>
> Except in matters specifically charged to him by the Board from time to time, and for the proper performance of which he shall be responsible directly to the Board, the Business Manager shall work under the general direction of the Superintendent of Schools, who serves as the Executive of the Board. . . . .
>
> While schools are in session, the janitors shall be under the general supervision of the Superintendent of Schools. During all vacations they shall work as directed by the Superintendent of Buildings and Grounds. . . . .

In an earlier number of this *Journal* comment was made on the action of the Chicago Board of Education in dismissing teachers who had not been rated as incompetent by their principals or by the associate superintendent. The action of the board has led to a number of efforts on the part of various organizations to secure legislative reorganization of the school system of the city.

Chicago Education Committee Investigation

The Education Committee of the city council began a series of hearings which it is expected will result in the drafting of a bill to be presented to the legislature. These hearings began by taking up the grievances of the Teachers' Federation and the various quarrels which the Board of Education has had with members of the Teachers' Federation. Hearings dealing with such matters as these were held in the spring, but developed little except acrimonious charges back and forth with regard to the honesty of various individuals and their interest in public education. In due time the committee of the council was brought to recognize the fact that a different type of hearing would be much more productive. It has therefore taken a step which undoubtedly will lead to a much more intelligent treatment of the local situation. What the committee has done in its more recent hearings is worthy of the closest study, because it is not unlikely that the governing bodies of other cities will find it necessary to go through exactly the same kind of investigations as have been held in these recent hearings. The committee called upon a number of the leading superintendents and school experts in the country to come to Chicago and answer questions put by the members of the committee with regard to the best plans for school organization.

Superintendent Blewett was the first school officer who accepted the invitation of the council committee. Mr. Blewett gave an account of the St. Louis school organization. This was especially useful to the committee because St. Louis has a school statute which defines with perfect clearness the functions of the different school officers. Chicago, on the other hand, has no statutory provision whatsoever for the superintendent of schools. There is no definition of his rights, and there is no legal background for his recommendations other than the rules of the board. These rules, furthermore, are not formulated in such a way as to make clear the relation of the superintendent to the appointment of teachers and other technical matters within the school system. Mr. Blewett's statements about the St. Louis statute were listened to with great interest by the committee. The committee came to recognize the desirability of securing by some means a clear definition of the functions of officers within the school system.

Superintendent Blewett was followed by Superintendent Chadsey. In another part of this number of the *Journal* comment is made on Mr. Chadsey's success in bringing about a reorganization of the Detroit school board. His experiences and his methods of dealing with his own school system threw much light on Chicago problems, which are not altogether different from those which appear in the city of Detroit.

The third hearing was devoted to a discussion by Superintendent Spaulding of Minneapolis. Mr. Spaulding gave an account of the action of the Minneapolis board in formulating rules of its own which gave to the superintendent of schools the largest authority under the board in conducting school matters, both on the financial and on the educational side.

Superintendent Maxwell of New York was unable to accept the invitation of the Committee to attend the hearing, but sent a long communication in which he set forth the general plans of organization which seemed to him wise.

Another hearing was devoted to a statement by Leonard P. Ayres, of the Russell Sage Foundation, of the elements which, in his judgment, ought to be incorporated into a revised statute. Mr. Ayres indicated ten points which he thought ought to be included in the revised law, and he also indicated certain general characteristics which he thought ought to appear. The general characteristics on which he laid stress were as follows: The law should be simple and clear, leaving details to the board. In the second place, there should be definite provision in the law for a single-headed system; that is, the business management of the schools should be subordinated to the educational management. Thirdly, provision should be explicitly made for keeping the public informed with regard to the success of the school organization and with regard to its operations. An elective board, as will be indicated in a later enumeration of his items, undoubtedly would bring about such public interest and spread of information. Finally, Mr. Ayres pointed out that there should be close co-operation between school and municipal authorities in financing the school system. The ten points which Mr. Ayres regarded as essential to a revised statute were presented by him in the following terms:

1. Brief and clear. Board given power to adopt regulations to meet city's needs.

2. Board of seven, unpaid, serving for three years and elected at large in spring election held in school houses every second year. (2+2+3.)

3. A single-headed system with superintendent as chief executive officer.

4. Board elects superintendent and fixes his salary. May elect for five-year term or for shorter term. After term elapses, tenure continues until board takes new action. Board elects all other employees on nomination of superintendent.

5. Board is charged with duty of providing ordinary educational facilities and given wide latitude in supporting special ones.

6. Employees to be elected each year for three years and thereafter for terms of three years.

7. Board shall adopt salary schedules.

8. Board has power to build and repair buildings, buy land, etc.

9. Board shall prepare budget each year. It is submitted to mayor for approval. If approved, it becomes part of city tax budget. If any item is disapproved, mayor returns with reasons.

Board reconsiders and holds public hearing. If five members now vote to adopt budget, it is passed despite mayor's disapproval. This process continues until budget is adopted.

10. Bond issues submitted to vote of people at school elections.

The committee of the council, as stated above, expects to formulate as a result of its hearings a statute which will be presented at the next meeting of the state legislature. In the meantime a number of citizens who have been interested in the schools of Chicago are formulating plans for the organization of a Public Education Association. The statement which this association is issuing as a call for the new organization is as follows:

Public Education Association in Chicago

A citizens' association for the consideration of school problems is a natural expression of the interest which the citizens of this city have always taken in the government of their schools. If one looks into the history of the school system of Chicago, he finds that long after other phases of the municipal government had been intrusted to representatives the people continued school districts as separate units and voted directly upon matters of school construction and school management. The reason why the school system was thus turned over to representatives only very reluctantly is easy to understand. The people were so much concerned with the education of their children that they insisted on keeping in direct contact with the whole machinery of school organization as long as possible.

When the city grew so large that there had to be a consolidation of the different districts, there was still a general desire to keep the school organization as flexible as possible. There was accordingly no rigid division of functions. When the school board was organized, its powers were borrowed directly from the community as a whole and were defined in the broadest and most indefinite terms. The school board was very little limited in its appointment of officers or in its government of the details of school organization. The present situation is the result of this type of development; the city of Chicago is operating, so far as its schools are concerned, under a law that is altogether inadequate for the great machinery which is necessary in the conduct of a public-school system that has entirely outgrown primitive forms. For example, the superintendent of schools in this city is not a statutory officer. He has no legally defined rights. He is simply the servant of the Board of Education and in his relations with the board he is not able to bring any large professional principles to bear as opposed to the wishes of the majority of the board. It is not to be assumed that a superintendent thus undefined and without special powers will be able to carry on his professional activities without serious embarrassment. In the same way the rights and obligations of teachers have been left in a very loosely defined condition, with the result that from time to time it becomes necessary for drastic action to correct practices that have gradually grown up in an undefined situation.

It is not necessary for a citizens' organization to attempt to judge of the merit of any particular controversies that have arisen. Indeed, it should be the aim of such an organization to keep distinctly out of controversies. The fundamental fact is that the present form of organization is such that it permits long-drawn-out controversies. Citizens have a right to ask for a revision of the situation which will safeguard their interests against controversies. Safeguards of the type desired can be provided only when there is clearness in the definition of rights and obligations.

Under these circumstances a citizens' organization which will make it its duty to study carefully those broad principles of organization which ought to appear in a statute governing the school organization is not only legitimate, but is the only natural method of securing an unprejudiced revision of the situation. When the school district was small and the people could come into first-hand contact with the course of study, with the qualifications of the teachers, and with the needs in the matter of school buildings, it was possible for them to be intelligent without a special organization. Even in these earlier days it is to be said that citizens did not make any careful scientific study of their problems. The type of intelligence which they exhibited was that type of personal knowledge of school matters which is always open to the possibility of bias. With the growth of the school system, and with the increase in the complexity of the course of study and the organization of schools, the possibility that the individual citizen will keep himself informed on school matters has been greatly reduced. Furthermore, the methods of scientific standardization of school

systems have rapidly developed in recent years and there is a fund of technical knowledge which is of great importance to citizens, but which can be given proper currency only through an organized effort to promote general intelligence on such matters. Finally, those who are genuinely interested in the organization of schools have, therefore, a new duty in providing the means for a careful study of the school situation and in providing that type of public support for movements of the right sort within the school system which shall insure legislation and board action making for the highest type of school work.

Several cities in the United States have found it advantageous to carry on broad general campaigns of education in the matter of school organization. The possibility exists in the city of Chicago of organizing a movement that shall put an end to the unfortunate results of the present undefined school situation through a careful study of the needs of the city and through a careful study of the proper principles of legislation that should underlie a revision of the school laws. An unprejudiced association should be organized with the purpose of devoting itself to a careful examination of these general problems, and should give its support to the drafting and enactment of a body of revised laws that shall put the school system on a sound modern foundation.

It is with this purpose in view that the Public Education Committee has undertaken to form a Public Education Association, with the confident anticipation that men and women of all occupations and all shades of opinion who have the interests of Chicago's public schools seriously at heart will join with us to carry this purpose to fulfilment.

EDUCATIONAL WRITINGS

Some years ago Professors Jessup and Coffman presented in a preliminary way the results of their studies on arithmetic. They have now extended their study and have brought together in a single volume[1] a large body of material which will be helpful to anyone who is criticizing or revising the course of study in arithmetic for elementary schools.

The book is especially significant because it makes its appeal to school supervisors. We have had in times past books on the methods of dealing with arithmetic in the classroom; we have had volumes that contain classroom devices; but very few articles and practically no books have ever appeared which are addressed primarily to the supervisors whose business it is to canvass in a larger way the more fundamental questions of the course of study and the organization of each of the lines of work to be administered by teachers in the classroom.

The interest which was exhibited in the earlier studies and the range of answers to the questions which were sent out to superintendents by the authors of this book give a promising indication that the supervisory officers of school systems are today basing courses of study on careful consideration of both the experiences of other school systems and the experiences of their own officers. For example, this book reports in a great deal of detail the recommendations of city superintendents with regard to the emphasis to be laid on various topics that are included in the course in arithmetic. One may be critical of material of this sort on the ground that the opinions of various superintendents are a doubtful basis on which to settle important questions of the course of study. It would, indeed, be advantageous if studies could be made of the results secured by emphasizing in different school systems different sections of arithmetic, but in the absence of this latter

[1] *The Supervision of Arithmetic.* By W. A. Jessup and L. D. Coffman. Macmillan, 1916. Pp. 225.

type of material the opinions of superintendents presumably embody in some measure the conclusions which they have reached after observing the work in their own systems. Consequently the tabulation of opinion is useful to one who is dealing with the course of study.

A somewhat more factual body of material turns up when the tabulations of the actual allotments of time to arithmetic in different school systems are given.

The chapter on the judging of textbooks is also factual and very helpful. In this chapter we have a summary of the amount of material presented in different textbooks on each division of arithmetic. Anyone who wishes, therefore, to compare a single book with the books commonly in use can find in these tables a general summary which will assist him in comparing the book in hand with all the others.

Tests and a summary of results of tests will be found in the later chapters of the book. This part of the book hardly does justice to the complete body of literature which has in recent years been accumulated with regard to efficiency tests in arithmetic, but it at least opens up the general field and gives the reader who wishes to come in contact with material of this type an opportunity to find out what has been done.

As a book for superintendents and supervisors this volume will be found to be of first-rate importance. As an example of a new type of educational writing there can be no doubt that the example set by these authors will be followed in other fields. When we have studies of this type with regard to all the subjects taught in the elementary schools, it will be possible to revise a course of study with a very large degree of intelligent recognition of what is being done all over the country.

The full report of the school survey of Denver[1] has been issued. This report consists of six separate divisions. The first of these publications is a discussion of the general organization and manage-

[1] *Report of the School Survey of School District Number One in the City and County of Denver.* Parts I-VI. Published by the School Survey Committee, Denver, Colorado, 1916.

ment of the school system by Professor Bobbitt. One of the very striking features of this volume, in addition to its discussion of the Denver situation, is a parallel-column statement of the relation between school management and the management of a business corporation. In these days, when the relation of the board of education to the superintendent is so much under discussion in a number of our larger municipalities, Professor Bobbitt's analysis of the situation will be very welcome.

Part II of the survey has already been commented on in an earlier number of this *Journal*. It contains Professor Bobbitt's discussion of the elementary course of study and a survey of the Denver high schools.

Part III is a discussion of vocational education by Dr. Prosser and Mr. Henderson. This volume discusses both the general principles of vocational organization and the details of the Denver situation.

Part IV was prepared by J. T. Byrne and deals with the financial organization of the Denver school system. Part V deals with the building situation and medical inspection. It is the work of Professor Terman of Leland Stanford Junior University.

The final section of the report is of special interest because it represents a new type of survey material. Professor Cubberley was asked by the committee that organized the school survey to go over the material presented and give his judgment about the soundness of the conclusions reached, especially those in regard to the organization of the school system. This supplementary report by Professor Cubberley is a kind of survey of a survey. The motives which were back of its preparation can be stated as follows. During the course of the survey and for reasons that reach back of the survey itself the Board of Education became deadlocked. It was very important in presenting the survey to make it clear that the various school interests which were jeopardized by this blockade would not use the survey merely as a device for securing partisan support. One faction of those engaged in the political controversy that has been waged in the city of Denver for some months past put forward the statement that the survey was such a partisan document. They held that the document

would have been of an entirely different tenor if it had been prepared by other experts than those who were engaged in the survey. The whole matter was therefore submitted to Professor Cubberley, who had not been engaged in the survey and was therefore not in any wise open to the suspicion of being biased. His contribution is a very interesting confirmation of the positions taken throughout the survey, and undoubtedly reinforces very strongly the positions here presented.

One other phase of the survey may be made a subject of special comment. The building situation in Denver has in recent years been running far behind the needs of the school system. Professor Terman has made perfectly clear the difficulties in which the city now finds itself. There can be no doubt at all that in many municipalities a situation not radically different from that which is now found in Denver is either already present or is rapidly reaching the stage where it will be necessary for the school authorities to take radical steps in order to provide the modern buildings necessary for the conduct of schools. Professor Terman has presented with the aid of this concrete example methods of studying the school situation that will be very helpful in a general way to all who are aroused to the importance of this material side of the school situation.

The problem of ventilating school buildings has in recent years been a subject of astonishing revelations. Experts in the departments of sanitary engineering and of bacteriology have been affirming that it is not necessary to introduce into a public building any great quantity of fresh air. They are emphasizing the importance of temperature and circulation of air, but are assailing many of the prevalent notions with regard to ventilation.

A commission which has been canvassing this matter in detail includes in its number Professor Thorndike, who has tried a number of psychological experiments which he and his students report in a volume[1] dealing with the relation of ventilation to mental

[1] *Ventilation in Relation to Mental Work.* By E. L. Thorndike, W. A. McCall, and J. C. Chapman. "Columbia University Contributions to Education." Published by Teachers College, Columbia University, 1916. Pp. 83.

work. The conclusions reached on the basis of these experiments is that a person can work and produce quite as much under unfavorable conditions of ventilation and temperature as under ordinary conditions. One may, indeed, be uncomfortable under these conditions, but this discomfort does not seem to impair the amount of work that one can do if he persistently holds to it. The difficulty with general conclusions based on such experiments is clearly pointed out by the authors themselves. It is not possible to assume that an experiment extending over a few days will take into account those changes which might result from a long period of confinement in rooms that are badly ventilated and badly heated. The experiments really mean, therefore, that an individual who is in good condition can withstand all of the adverse conditions dealt with in these experiments during the first few days of his contact with these adverse conditions. As Mr. Thorndike has clearly put the matter, it is important that the experiment should be continued and extended. In the meantime, one is disposed to offer exactly the same caution with regard to all the investigations on ventilation. While the adverse effects may be slow, there seems to be a great deal of general experience which would indicate that it is not safe to neglect some of the ordinary precautions which have become very fortunately common in modern school buildings. One should not ignore ventilation because ordinary people can withstand bad ventilation without immediate evil consequences.

The General Education Board in publishing the second report of its secretary[1] has chronicled in some detail the lines of activity which the Board is taking up. The various appropriations of money which have been made are stated, and the amounts are presented in full in the financial statement which follows the description of the Board's work. Some brief statements are made in the case of a number of appropriations, indicating the purposes of these appropriations. Thus, in the first chapter, in stating the amount of money granted to various colleges, maps are included showing the constituencies of these colleges, and in this way the definite grounds on which the Board determined its granting of appropriations.

[1] *The General Education Board, Report of the Secretary*, 1914–15. Pp. 82.

The second chapter deals with medical education, the third with education in the southern states, the fourth gives an account of farm demonstrations, the fifth deals with educational research, and the sixth gives a brief statement with regard to the Maryland survey. Thirty pages are devoted to a financial accounting. The page opposite the title-page catalogues the publications of the Board. Numerous publications are to be expected from the Board, presenting the results of the various investigations which are being carried on. Since these publications are distributed by the Board gratis, the secretary's report will be of interest to all who aim to keep in contact with this output.

The importance of this agency in educational work is clearly presented in the few pages of this report. The promise of a great deal of productive material which is to be drawn from this source as a result of these appropriations is also very encouraging.

The problem of formulating a good question to use for purposes of class instruction is one which will be recognized by all teachers as a major problem in educational method. When two skilful teachers[1] who have for a long time been engaged in dealing with classroom methods record their views on such an important problem, the result is sure to be of interest to everyone connected with schools either in a practical or in a theoretical way.

Mr. and Mrs. Hall have given their views in the matter of the best methods of asking questions very concrete expression in a volume full of exercises that can be used directly in classroom work, especially in the lower grades of the elementary school. Their book contains a little introductory material and some short paragraphs on the general principles underlying their methods, but in the main the volume is a concrete statement of examples of the way in which they would conduct class exercises. Their view is that the teacher should present the material which is to come before the class in such a way as to raise naturally certain questions that will anticipate the various stages of the story or of the subject-matter which is being taught. An example from the early pages

[1] *The Question as a Factor in Teaching.* By J. W. Hall and A. C. K. Hall. Houghton Mifflin Co., 1916. Pp. 189.

of the book will show what their method is throughout. In telling children the story of "The Street Musicians," they suggest that the procedure be as follows:

> There was once a donkey that, having served his master faithfully for many years, grew too old and feeble for further work. What should the master do about it? But the donkey heard his master say he would have to get rid of him. What could the donkey do? Thinking that he had a strong and musical voice, he decided to become a street musician, and at once set out for Bremen, where he hoped to make a living.
>
> The donkey had not traveled far until he saw an old dog lying by the roadside and panting with weariness. Why would the donkey be sorry for him? What reason could a dog have for running away from the master with whom he had hunted for many years? What would he tell the donkey? The donkey asked the dog to go with him and play the drum.

This interspersing of questions in the story itself keeps the attention of the children alive and makes them a part of the story-telling. More than half of the book is devoted to stories outlined in the fashion indicated in these paragraphs. The last few pages of the volume show how the same general principle may be applied to more advanced subjects.

The book is one which can be classified as a handbook of devices of classroom instruction. The method is not absolutely novel, but in its presentation it is impressively in advance of the unstudied and unfruitful questioning which very frequently appears in routine school work. There can be no doubt at all that a book of this sort will stimulate a great deal of very productive thinking on the part of elementary-school teachers. It is suitable as a textbook for a course in methods and will be found useful to individual teachers in their regular class work.

The vocational guidance movement has led many students to recognize the importance of discovering the relation between individual traits of character and business opportunities. If a child is to go into a certain occupation, the probabilities of success depend so largely upon his natural equipment for this particular kind of work that there should be, so far as possible, a careful adjustment with the purpose of bringing into a given occupation only those who are likely to succeed in that occupation.

Experimental psychology has from time to time offered suggestions with regard to tests and modes of study of individuals which would contribute to the kind of knowledge that is needed for vocational guidance. The title adopted by Professor Hollingworth for his book[1] indicates that he has seen the importance of collecting in a single volume as much of general psychology as promises to throw light on vocational problems. The book is written in a style which is intended for business men as well as for teachers.

The author has introduced some introductory material which will perhaps help to show the importance of a study of these vocational problems. He has pointed out that primitive man tried to look into the future by magical incantations and other devices full of superstition. He traces the historical development of phrenology and physiognomy. These pseudo-sciences he sets aside on the basis of a general criticism and of some detailed study of the relation between appearance and success in vocational callings.

After fifty pages of introductory material the book gives a review of the different tests that have been employed in psychological laboratories, and makes applications of these different tests.

Mrs. Hollingworth contributes material on the vocational aptitudes of women as distinguished from men. The volume closes with a classified bibliography and with an appendix repeating some of the tests which have been used by various authors.

The impression which a reader gains from this book is that the possibility of determining with any degree of definiteness the psychological background for entering any vocation is still remote. The work which has been done up to this time makes it perfectly clear that there are great individual differences to be discovered by any system of tests. That these individual differences have a bearing on vocational life certainly cannot be denied, but just how one is to relate the psychological findings with the practical situation is still an open question.

There is recognition in the book of the necessity of another type of study, namely, a careful examination of the industries, such as

[1] *Vocational Psychology.* By Harry L. Hollingworth. D. Appleton & Co., 1916. Pp. 308.

was made in the Minneapolis survey. With descriptions of the requirements of the different industries and with some insight into individual psychological differences, the progress of vocational guidance will certainly be in a forward direction, but it would not be in keeping with the facts to assert that this movement has a solid foundation in scientific fact at the present moment. The volume on vocational psychology, like the rest of the literature on vocational guidance, outlines a program, but not a body of substantial results.

The World Book Company has reprinted a report[1] prepared by Mr. William McAndrew, associate superintendent of public schools in New York City. The publishers have enlivened this school report with some little drawings which add to the humor and readableness of the book. The style is the familiar style which the educational world has come to expect from Mr. McAndrew. The argument is an argument for improvement of children, improvement of teachers, improvement of principals and all school officers through a steady effort on the part of everyone to promote efficiency.

No clearer argument has ever been presented than that which appears in this little book for efficiency standards in the school. These efficiency standards apply to the work of the teacher and to the work of the children themselves. Indeed, Mr. McAndrew with his usual epigrammatic skill has put together the qualities of an efficient child and the qualities of an efficient teacher. One can hardly refrain from commenting on the compactness with which he has brought together in this single little volume many of the virtues which are being aimed at in the present movement toward efficiency.

The argument which he presents is an argument to meet the criticisms which he says have been launched against the educational system during the year.

Among the items which are clearly presented in this book, the argument for more efficiency on the part of school principals is the

[1] *The Public and Its School.* By William McAndrew: Yonkers-on-Hudson: World Book Co., 1916. Pp. 76.

most impressive. The school principal has long been an officer standing between the superintendent and the teachers. The school principal has commonly been the senior teacher, very frequently appointed to the principalship merely because he has reached the age when he naturally would retire from classroom work. That there should be some special preparation for the principalship and that the obligations of this office differ from the obligations of the teaching office have all too frequently been omitted from consideration. Mr. McAndrew points out in this little book the fact that the principal ought to recognize his duties with clearness and work them out in such a way as to avoid devotion to the mere petty clerical details that now too often absorb his attention.

This school efficiency monograph with its humor and its good sense will go a long way toward promoting a movement which has sometimes been looked upon with skepticism by those who have regarded it merely as a dry-as-dust movement.

Perhaps it will not be out of place to repeat Mr. McAndrew's summary of recommendations, because this summary gives the gist of his arguments and of his recommendations:

> Every school system I know of accumulates a collection of reports in which definite propositions go no farther than to become academic literature. This is due in part to the judgment of recipients of the reports that the propositions are unworkable or inopportune or of less importance than other pressing demands. But in considerable measure the neglect of recommendations is due to the fact that the reporter suggests work to be done by someone else. In the present case the propositions are suggestions of what I will try to do if assigned to the Brooklyn divisions and given responsibility and authority to carry out the prospectus.
>
> I submit a summary of these propositions:
>
> *a*) Provide by co-operation with the teachers themselves for definition and renewal of modern educational ideals by a professional bulletin to all teachers free, and by Saturday meetings to supplant the superintendent's Saturday morning office hour.
>
> *b*) Rely more on councils of principals and teachers.
>
> *c*) Invite a committee of employers to submit definite statements of what they expect of a public school graduate. Submit this to principals, citizens, and local boards. Formulate a list of such habits and abilities as are chiefly and secondarily the purpose of school.
>
> *d*) Make a tentative set of standards for estimating the prevalence of such habits and abilities.

e) Discuss and apply suggestions furnished by the New York Board of Education's Division of Reference and Research.

f) Induce some principals of large schools to try the plan of providing for an eighth year schedule which groups pupils for special treatment in spelling, writing, and mathematical results, according to their tested ability.

g) Introduce practice in mathematical computation and in spelling as entertaining features of assembly exercises.

h) Encourage a series of meets for contests between classes and schools in spelling, writing, and figuring.

i) Supplant the slightly valued efficiency record given to graduates by one that rates abilities about which employers desire information. Print upon new permanent record cards which accompany pupils from grade to grade provision for rating these abilities in sixth, seventh, and eighth years.

j) Revise the system of rating teachers. Consider with voluntary councils the rating plans published by the Division of Research. Make increase of success, as demonstrable in work done, a condition of increase of pay.

k) Agree that informal complaints shall not be received from members of the system. All parties complained of either will be present or will receive the complaints in writing.

l) Encourage pupils' patrols for keeping buildings clean.

m) Institute an examination of the amount of clerical work required for the schools and take steps to reduce it.

n) Advise principals that office work by them before noon should be abandoned in favor of class inspection and examination.

o) Prepare from observation of the best managed schools a monograph showing disposition of routine and of higher functions.

p) Impress upon school managers the importance of a knowledge of daily and hourly cost of instruction and the principal's function as an agent to guard against salary waste as well as misuse of other money expenditures.

q) Reward the principals who secure steady work of teachers and pupils on opening days and on days preceding vacations.

r) Detail two teachers for actual class tests through the schools as directed by the division superintendent.

s) Make the short outdoor march on Flag Day an annual custom.

t) Let Brooklyn principals have this report early in September, 1915.

It has frequently been a subject of comment that the recreations of our urban communities need to be systematized and that opportunities for refined forms of play both for adults and for children need to be expanded. Some of the recent school surveys, notably those of Cleveland and St. Louis, have drawn attention to the importance of studying the outside play activities of school children as a basis for the full treatment of the problem of physical education

within the schools. We now have a most comprehensive survey,[1] not only of children's play, but of the whole recreational life of a city.

The committee which made this survey was headed by Professor Hetherington, of the University of Wisconsin, and included representatives of the churches, schools, trade-unions, philanthropic, civic, and social organizations, to the number of thirty-one workers.

This committee prepared maps showing the distribution of all the children and all the buildings in the city. They have tabulated all the opportunities for recreation for all classes of people. They have shown where possible playgrounds have not been developed in empty lots and where the best use has been made of available space for play. They show how the city, the schools, the churches, and other organizations furnish recreation for the people. They have canvassed all the commercial recreations, such as motion pictures, dance-halls, boat liveries, saloons, and the like. They have recorded what children and adults do. The descriptions and tabular material are supplemented by photographs.

The assembling of all this information is a most interesting exhibition of the tendency of the times to begin all social reform by finding out present conditions and possibilities. The surveyors were, however, clearly aware that any real reform will have to depend on more than the mere collection of information. They therefore recommend the creation of a commission to be known as "The Madison Central Play and Recreation Committee." This committee is to exercise the following functions:

a) To sit perpetually as the central promoting, co-ordinating, legislative, and, when necessary, administrative and judicial body on play and recreation in Madison with the object of securing a wholesome play program and constructive use of leisure time for the city as a whole and for all classes of people in all the various sections of the city.

b) To act as a co-ordinating body in bringing together such city officials and representatives of institutions, organizations, and business necessary to solve large recreational problems, initiate movements, or establish policies of wide influence (for example, to consider problems of commercial recreation).

c) To promote the establishment of play and recreational facilities and the organization of the use of those facilities under trained leadership (for example, city gymnasiums and natatoriums).

[1] *Madison* [Wisconsin] *Recreational Survey.* Prepared and published by a special committee of the Madison Board of Commerce, 1915. Pp. 103.

d) To create associations and foster existing associations that extend the influence of various classes of recreational activities to large numbers of people (for example, boys' and girls' athletic leagues; business men's tramping clubs, art associations, etc.).

e) To promote an organization for the use of facilities that will produce among the adults a democratic self-initiation and self-support in their recreation independent of public support (for example, club or association use of schoolhouses, etc.).

f) To organize or promote the organization of groups which have no organization, adequate facilities, or wholesome activities (for example, newsboys or street boys).

g) To advertise and promote the use of the wholesome recreational facilities of the city and its environment, so that all classes may know its recreational resources and be able to use them.

h) To act as a "clearing-house" to aid existing agencies in their recreational efforts and secure co-operation among these agencies where possible [p. 103].

Though many of the findings of the survey would be of interest to teachers, one significant item must suffice for the present review.

The most conservative estimate that could be obtained as to the average daily attendance at motion-picture houses was found to be 4,000 persons for week days, and 7,000 persons for Sunday, with an average weekly attendance of 31,000 persons. This attendance, when one takes into consideration the fact that Madison has a population of approximately 35,000, including university students, indicates that attendance at movies is an extremely popular form of amusement. The production of a good many motion pictures of an unusually high order attracts people of a type who do not ordinarily attend the movies. This helps swell the total attendance. . . . .

As a basis for considering the specific conditions, a general average of the whole city was taken from all reports received. It was found that 44.7 per cent of the total, or 4,665 persons, reported as attending the movies were men, 34.4 per cent were women, and 20.9 per cent were children under seventeen years of age. Of the children, 28.4 per cent were accompanied by elders, 3.5 per cent of all the children were infants, 54.9 per cent were boys, and 41.6 per cent were girls. The percentage of attendance of children at movies in many cities has been estimated at about 20 per cent, thus indicating that Madison is not exceptional in the number of children attending. The proportion of men to women attending is 4 to 3. The same ratio, 4 to 3, is the proportion of boys to girls [pp. 52–53].

HOUSEHOLD MANUFACTURES IN THE UNITED STATES: A QUARTER-CENTURY OF DEVELOPMENTS 1784–1809. II

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HOUSEHOLD MANUFACTURES THE DOMINANT FACTOR IN THE STRUGGLE FOR ECONOMIC INDEPENDENCE

Economic and political conditions in the two decades next preceding 1810 were on the whole conducive to sustaining and increasing household manufacturing. The uncertain trade relations between the United States and England, the quasi-war with France in 1798, the unfavorable balance of trade,[1] Jefferson's embargo policy,[2] and the westward movement of population, all tended to force the people to depend more or less upon the homes and plantations for many of the necessities of life. Of all these influences the last two were the most potent. The embargo policy cut off, not only the manufactured supplies which had been coming from England and France, but also the proceeds from the staple articles that the farmers had been sending to these countries. As the frontier moved westward, the distance to a market both for raw materials and for manufactured goods became greater and greater. In reality it was as far from the Ohio, Indiana, Kentucky, and Tennessee frontiers in 1810 to the eastern markets as it was from

[1] During the seven years next following 1795 there was a balance of trade against the United States amounting to $106,609,363, or $15,229,909 per annum (Seybert, *Statistical Annals*, p. 277). For the trade relations of the United States with each of the important countries of the world during these seven years see *ibid.*, pp. 276 f.

[2] During the early stages of the embargo and non-intercourse policy public meetings in Richmond adopted, among other patriotic resolutions, one saying that they would dress in domestic fabrics. Mordecai, commenting on this, said: "As homespun 'was the only wear,' the price of coarse mixed *Virginia cotton cloth* was a dollar or more a yard for such as now [1860] is worth twelve or eighteen cents, and many of our citizens who could afford it . . . . were thus arrayed from head to foot" (*Virginia, Especially Richmond, in By-Gone Days*, p. 320).

the Colonies to the English markets during the Colonial period. The lack of a market for the products of the frontier and the high cost of imported articles forced the people to become almost independent economically. At first this was a household independence, later a community one. The condition at any one time in a community was determined by the status of the handicraft system and by the character of the frontiersmen.

Except in the extreme frontier communities separated from the base of supplies by inadequate transportation facilities, New England before 1810 had passed into the shop stage of manufacturing in almost every manufactured article except clothing. The women of the household refused to permit the professional spinners and weavers to usurp the traditional adjunct to their household duties. Goodrich's account of general industrial conditions in Ridgefield, Connecticut, in 1800, which, as he asserted, was a typical New England town containing about two hundred families nearly all farmers, portrays fairly well the amount of manufacturing going on in the homes and the amount done by the tradesmen at this date in the whole of this region. There was a butcher who went from house to house to slaughter the cattle and swine of his neighbors. There was a tanner, a tailor, a weaver, and a shoemaker, but all were in the itinerant stage. The weaver went from house to house, put up his loom, and threw his shuttle till the season's work was done; twice a year the tailor came to the house and made the semiannual stock of clothes for the men and boys; upon due notice the circulating shoemaker came with his bench, lapstone, and awl, and converted some room into a shop until the household was duly shod, the leather used being that sent back from the tanner from the hides of the cows and calves that the family had killed for meat. The hatter, whose craft was one stage in advance of the foregoing ones, had a place of business and made hats to order in exchange for skins of foxes, rabbits, muskrats, and other chance peltry. The furniture was made by the village cabinet-maker and the fuller dyed and fulled the woolen cloth.

Of the manufacturing done in the homes, Goodrich tells us that they raised their own flax, rotted it, hackled it, dressed it, and

spun it. The little wheel, turned by foot, had its place and was as familiar as if it had been a member of the family. The wool was also spun in the family, partly by his sisters and partly by Molly Gregory, daughter of their neighbor, the town carpenter. Sugar was often made, but most of the supply came from the West Indies. The carpets were all homemade. Soap and candles were also made in the home. The woolen cloth was sent to the fuller to be dyed and fulled, while the linen was bleached and made up in the family.[1]

In going through New England in 1806, Melish made note of the household manufactures. According to his observations, the farmers of Connecticut and their families were generally dressed in cloth of their own manufacture, which was both substantial and good.[2] In the interior of Massachusetts there was a vast variety of family manufactures.[3] Of New Hampshire he remarked:

[1] *Recollections of a Life Time*, I, 64, 71, 72, 74. The picture of North Brookfield, Massachusetts, quoted from Dr. Snell's description of the town in 1798 when he settled in it, by Temple (*History of North Brookfield*, pp. 267 ff.) shows that the foregoing was not an isolated case. There were about a thousand people in the town at this date. These were nearly all husbandmen. What few mechanics there were, were also farmers upon a large or small scale. Among these half-mechanics and half-farmers were a blacksmith, a nail-maker, a gunsmith, wheelwrights, carpenters, coopers, cobblers, peeled broom-makers, and tailors. The cobblers had a bench in their kitchen and would also go around to the farmers' houses in the fall with their kit and stay a week or so, mending and making the family supply of shoes. The father or grandfather was still making most of the brooms. The wheelwright made ox-carts, wheels, axles, and tongues, the remainder of the cart being made by the farmer. The carpenter had little to do, because every thriving man could hew, mortise, and lay shingles. The spinning, weaving, and dyeing were still done in the households. Every family owned a great and a little wheel as well as a loom. The dye pot was still in the chimney corner. Soap was made in every family. There were also at this time a potter, a sieve-maker, and four cider-mills. For conditions in Maine from 1800 to 1810 see Bourne, *History of Wells and Kennebunk*, and Emery, *History of Sanford*. Memories of the conditions portrayed were yet fresh when Bourne wrote his account.

[2] Melish, *Travels in the United States of America*, p. 101.

[3] *Ibid.*, p. 93. That Melish's general statements are substantiated by the actual conditions is seen by what was actually made in Berkshire County, Massachusetts, in 1808. Of woolen goods there were 55,212 yards made in 10 of the 30 towns of the county. The towns were: Lenox, 3,030 yards; Lanesboro, 5,000 yards; Hinsdale, 2,000; Sandisfield, 5,441; Cheshire, 6,960; Pittsfield, 15,270; Great Barrington, 4,400; Stockbridge, 3,250; Tryingham, 5,450 (estimated); Alford, 4,400 (estimated). It was estimated by the *Pittsfield Sun*, which gathered this information, that the total product of the Berkshire looms was at least 100,000 yards. In commenting on this

"The country people generally manufacture their own clothing, and make considerable quantities of tow cloth for exportation";[1] and of Vermont: "The principal manufactures are of the domestic kinds, consisting of wool and flax, for the family use."[2]

The people in the middle states were probably as active as those in New England in household manufacturing during the two decades under consideration. In going through New Jersey in 1807 Melish was led to remark: "The inhabitants of New Jersey, except in the towns, make the greater part of their clothing."[3] Of

fact the editor said: "Here then in a single branch of manufacture, carried on principally in the private families, at a very trifling expense, and interfering very little with the great business of the farmer, which yields to this small county—consisting by the last census of about 33,000 souls—more than $100,000, being more than three dollars to each person of all ages and sexes. It is easy to see how greatly the wealth, comfort, and happiness of our country are promoted by pursuits of this sort, and how far they tend to increase and invigorate the solid sinews of national wealth. It is equally obvious to see how easy it would be for our farmers to double the amount of this branch of manufactures in *quantity*, even by the increase of the common wool of our country; and equally to quadruple it in *value*, by cultivating the finer species of wool, which is not happily brought within the reach of everyone."—Quoted by Smith, *History of Pittsfield*, p. 177.

[1] *Ibid.*, p. 84.

[2] *Op. cit.*, p. 86. This statement is substantiated by facts gathered in 1809. In October of this year the General Assembly of Vermont appointed a committee composed of one member from each county to prepare a statement of the manufactures of the state. The following is the report of the committee on cotton, linen, and woolen goods made in the homes during the year ending October, 1809:

Counties	Cotton and Linen Goods Yards	Woolen Goods Yards	Clothier's Works Number	Carding Machines Number
Bermington	84,110	62,900	11	9
Windham	120,000	100,000	24	16
Rutland	170,000	143,040	26	18
Windsor	269,090	134,045	34	25
Addison	127,600	107,200	15	13
Orange	177,000	177,000	19	19
Chittenden	128,000	110,000	8	8
Caledonia	135,000	110,000	12	10
Franklin	32,600	40,400	7	10
Orleans	33,000	30,000	4	4
Essex and Grand Isle	28,960	28,960	3	3
Total	1,305,360	1,043,545	163	135

The committee omitted hosiery from the report given above. It was claimed that every article made from wool, cotton, or flax was made in nearly sufficient quantities for the common use of the family (*Rec. Gov. and Council of Vermont*, V, 500).

[3] *Op. cit.*, p. 113.

Pennsylvania, he said: "Domestic [family] manufactures are general throughout the state."[1] In his message to the General Assembly in 1808 Governor Mitchell of Delaware recommended the countenancing by law, so far as it could be done without too much interference and regulation, of every species of family manufacture.[2] While the Delaware legislature took no action respecting this recommendation, yet the Assembly of New York this same year did take up the matter and passed a law to encourage rather than regulate the industry.[3] This law provided for a premium of $80 to any person who in his family manufactured within any of the counties of the state the best specimen of woolen cloth of uniform texture and quality, containing not less than 30 yards and not less than three-quarters of a yard in width. The county judges were to determine by a majority vote to whom the premium should be awarded each year.[4] In 1810 this law was enlarged to include premiums for the three best pieces of the same kind of cloth. The premiums were $40, $45, and $30. The amount of cloth required for each was 30, 25, and 20 yards.[5] The effects of these acts are seen in Tables III and IV.

Tables III and IV furnish evidence of the interest in and results of household manufactures in New York during a period of more or less forced economic independence. While they do not exhibit the amount made in each county, yet they do show that the custom

[1] Melish, *Travels in the United States of America*, p. 132.

[2] *Journal of the House of Representatives, Delaware*, 1808, p. 16.

[3] It should be said for Delaware that in 1809 sheep were exempted from taxation. Ten or less could not be seized for debt. The act was to continue for five years (*Laws of the State of Delaware* [printed by M. Bradford and R. Porter], IV, 267).

[4] *Laws of the State of New York*, 31st Sess., chap. 360.

[5] *Ibid.*, 33d Sess., chap. 108. In June, 1812, the act of 1810 was renewed for three years (*ibid.*, 35th Sess., chap. 230), and in 1817 the act of 1812 was revived, but was repealed in 1819 (*ibid.*, 40th Sess., chap. 240, and 42d Sess., chap. 230). These laws were the result of work done by the Society for the Promotion of Arts in New York. In 1807 this society voted one Walter Briggs, of Schoharie County, a piece of silver plate in consideration of his having laid before the society five specimens of woolen cloth of superior quality, made from the wool of his flock consisting of about 300 sheep. About 1,200 yards of cloth were made annually by the daughters of Mr. Briggs (*Trans. of the Albany Institute*, IV, 114). Out of this incident grew the notion of having the state offer money premiums for similar products, hence the law of 1808 mentioned above.

TABLE III

DISTRIBUTION BY COUNTIES OF PREMIUMS AWARDED IN NEW YORK STATE UNDER THE ACTS OF APRIL 8, 1808, APRIL 5, 1810, AND JUNE 19, 1812*

Counties	Number of Premiums in					Amount of Premiums in				
	1809	1810	1811	1813	1814	1809	1810	1811	1813	1814
Albany	1	1	3	3	3	$ 80	$ 80	$ 105	$ 105	$ 105
Alleghany	1	....	3	....	....	80	.....	105	.....	.....
Broome	1	1	3	1	....	80	80	105	30	.....
Cattaraugus	....	....	....	....	....	.....	.....	.....	.....	.....
Cayuga	1	1	3	....	3	80	80	180	.....	105
Chautauqua	....	....	....	....	....	.....	.....	.....	.....	.....
Chenango	1	1	3	....	....	80	80	105	.....	.....
Clinton	1	1	3	....	1	80	80	105	.....	30
Columbia	....	1	3	....	....	.....	80	105	.....	.....
Cortland	....	1	3	3	3	.....	80	105	105	105
Delaware	....	1	1	3	3	.....	80	(?)	105	105
Dutchess	1	1	2	1	4	130	230	165	40	235
Essex	....	1	3	2	2	.....	80	105	65	70
Franklin	....	1	3	....	....	.....	80	105	.....	.....
Genesee	....	....	3	....	....	.....	.....	105	.....	.....
Greene	1	1	3	3	3	80	130	105	105	150
Herkimer	1	1	3	3	2	80	80	105	105	75
Jefferson	1	1	3	....	....	80	80	105	.....	.....
Kings	....	1	....	....	1	.....	80	.....	.....	40
Lewis	1	1	3	....	3	80	80	105	.....	105
Madison	1	1	3	3	1	80	80	105	105	40
Montgomery	1	1	3	3	....	80	80	105	105	.....
New York	....	....	....	....	....	.....	.....	.....	.....	.....
Niagara	....	....	....	....	....	.....	.....	.....	.....	.....
Oneida	....	1	3	....	1	.....	80	105	.....	40
Onondaga	1	1	3	....	3	80	80	105	.....	105
Ontario	....	1	3	2	3	.....	80	105	75	105
Orange	1	1	3	2	4	80	80	105	75	225
Otsego	1	....	2	3	3	80	.....	75	105	105
Putnam	....	....	....	....	....	.....	.....	.....	.....	.....
Queens	1	1	3	3	3	80	80	105	105	105
Rensselaer	1	1	3	3	3	80	80	105	105	105
Richmond	....	....	....	....	....	.....	.....	.....	.....	.....
Rockland	....	1	3	....	3	.....	80	105	.....	105
St. Lawrence	1	....	1	2	3	80	.....	40	75	105
Saratoga	1	1	3	3	4	230	180	105	345	215
Schenectady	....	1	1	3	3	.....	80	40	105	105
Schoharie	1	1	3	3	3	80	80	105	105	105
Seneca	1	1	3	1	3	80	80	105	35	105
Steuben	1	....	3	3	....	80	.....	105	105	.....
Suffolk	....	1	3	1	2	.....	80	105	40	75
Sullivan	....	....	1	....	3	.....	.....	40	.....	105
Tioga	1	1	3	3	....	80	80	105	105	.....
Ulster	1	....	3	3	....	180	.....	105	105	.....
Warren	....	....	....	....	3	.....	.....	.....	.....	105
Washington	....	1	1	3	2	.....	80	(?)	105	75
Westchester	....	....	1	....	2	.....	.....	40	.....	75
Total	25	32	103	63	80	$2,300	$2,860	$3,695	$2,460	$3,085

* *Trans. of the Albany Institute*, IV, 124. For a list of the persons who received the premium awarded by the county judges, see *ibid.*, pp. 117 ff. The specimens are preserved in the Institute library. They are arranged in five volumes. Each volume contains the returns for one year. The law of 1810 expired at the end of 1811. There were no premiums for the year 1812.

was common throughout the state. The few general citations respecting the extent to which the industry was carried on in the other middle states and New England suggest that the facts indicated by the tables were not restricted to New York.

TABLE IV

GENERAL SUMMARY OF PREMIUMS AWARDED BY THE SOCIETY FOR THE PROMOTION OF USEFUL ARTS IN NEW YORK AND BY THE COUNTY JUDGES UNDER THE ACTS OF 1808, 1810, AND 1812*

YEARS	PREMIUMS AWARDED BY THE SOCIETY		PREMIUMS AWARDED BY THE COUNTY JUDGES				TOTAL BY SOCIETY AND COUNTY JUDGES	
	Number	Amount	Number of			Amount	Number	Amount
			Firsts	Seconds	Thirds			
1809	4	$ 450	25	0	0	$ 2,300	29	$ 2,750
1810	4	450	32	0	0	2,860	36	3,310
1811	6	420	39	33	31	3,695	109	4,115
1813	5	370	22	22	19	2,460	68	2,830
1814	5	240	32	25	23	3,085	85	3,325
Totals	24	$1,930	150	80	73	$14,400	327	$16,330

* *Trans. of the Albany Institute*, IV, 123. The form used by the Society in awarding premiums was as follows:

STATE OF NEW-YORK
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By the Society for the Promotion of Useful Arts, This premium is awarded to . . . . of the County . . . . for the best (or as the case may be) specimen of Woollen Cloth, of family manufacture, exhibited the present year (*Trans. of the Society for the Promotion of Useful Arts*, III, 249).

Household manufactures were in a flourishing condition in the southern states during most of the two decades next preceding 1810, the embargo policy and the general trade conditions being conducive to the fostering of them during this period. As Isaac Weld passed through the upper neck of Virginia (between the Potomac and the Rappahannock) in 1796 he noticed that nearly every article that could be wanted by the planters was made or produced upon the principal estates. In this region the slaves were instructed in the business of smiths, carpenters, wheelwrights, turners, tanners, weavers, etc. From the cotton grown on the plantations a sort of nankeen was made by the negroes.[1] Other regions of the South were equally as busy as Virginia in this planta-

[1] *Travels through the United States and North America* (4th ed., 1800), p. 114.

tion manufacturing. Maryland, in 1803, exempted from public assessment all homemade wares in the hands of the makers. Plantation utensils and working tools of mechanics and manufacturers were exempted at the same time.[1] Nor was South Carolina behind Virginia and Maryland. In his view of this state about 1800, Drayton said:

> Hence, where the population of the state is convenient to commerce, the manufacturing business is not at all entered into; importations from abroad supplying all the necessary wants. But, as transportation is more difficult to, and from, the middle and upper country; so necessity has, in a proportionate degree, compelled the inhabitants to provide for their respective wants. And thus a domestic spirit of manufacturing has arisen, which must prevail in those parts of the state. The traveller there soon becomes accustomed to the humming music of the hand spinning wheel; and the industry of the loom often meets his eye. Cottons are thus made, both striped, figured, and plain, of ingenious fabrications; as well for clothes, and the table, as for house use; woolens also, of strong nature and decent appearance, are woven and dressed by suitable fulling mills; coarse linens, blanketing, woollen bed covers, and cotton rugs are also manufactured. With the exception of salt and sugar, the people in the upper part of the state may be considered independent of foreign support.[2]

In going through North Carolina in 1807 Melish noted that practically all the families in the country manufactured their own clothing, so that the "British trade," as he remarked, "to this state is not great or important."[3] Similar conditions were observed in

[1] Maxcy, *Laws of Maryland*, III, 110.

[2] *A View of South Carolina* (Charleston, 1802), p. 150. Ramsay in his *History of South Carolina* (II, 257 f.) gives a similar word-picture of the conditions about 1808. He says: "Where slaves abound and the staple commodities are raised in the greatest plenty, the least attention is paid to the domestic manufacture of articles of clothing. If the crop succeeds and afterwards sells for a good price, there is money to buy clothing; but if either fails, the reverse takes place, and no provision is made against the pinchings of a cold winter. The least wealthy are generally the most provident. The loom and the wheel are most steadily plied among the minor planters or farmers. . . . . Among such domestic manufactures now are and for a long time have been carried on for almost every necessary family purpose. . . . . Wool, cotton, and flax, either combined or separate, are worked up into plain garments for warmth, but are seldom made of so fine a texture as to be suitable for summer wear. Though domestic manufactures are daily increasing in quantity and improving in quality, and are carried on, especially in the interior parts of the state, to so considerable an extent that their aggregate is very great, yet they are far short of a sufficiency for the supply of the inhabitants."

[3] *Op. cit.*, p. 189.

Georgia. After a day and a half's journey out of Savannah toward Augusta, a stop was made at a farmhouse for dinner. On hearing the noise of a wheel upstairs, the traveler went up and found the daughter of the landlord spinning the rolls of cotton which a black girl was busy carding. On inquiry of the mistress of the house he found that this family, as well as all other families in the neighborhood, spun cotton all the year round and got the yarn woven into every article necessary for family use, such as sheeting, shirting, toweling, tablecloths, gowns, petticoats, aprons, caps, pantaloons, vesting, and summer coats for the men's use—besides sofa-cloths, fringes, tassels, hosiery, etc. "I examined," said he, "the yarn and cloth and found the fabrics substantial and durable. The cloth was neatly manufactured, and some of the articles were handsome. I saw that this family was 'independent of commerce,' and this was the first impression that I had received as to the importance of the domestic manufactures of America."[1] At Sparta he was informed that there was no demand at all for British goods and that all the people were clothing themselves in homespun.[2] Victor Clark summed up conditions in the South a decade or so prior to 1810 very adequately when he said:

> Therefore prior to the War of 1812, the advance of Southern manufacture was principally in what were then household arts—those that were produced for the subsistence of the family rather than for an outside market. These manufactures continued generalized and dispersed rather than specialized and integrated. There is little evidence even of that rudimentary localization that for a century and a half had characterized some industries in New England and Pennsylvania. This did not indicate stagnation but rather an adaptation of manufactures to the economic constitution of Southern society. In their aggregate these manufactures were for a time considerable; but they were so distributed and combined with other productive activities as to lose their identity in contemporary records.[3]

[1] Melish, *Travels in the United States*, p. 40.

[2] *Ibid.*, p. 263. Melish spent a night at a farmhouse about half-way between Sparta and Greensburg. Of his experiences here he said: "On reaching the house, I found the family all busily employed in manufacturing, and they showed me a number of articles, which were very good, some of them handsome. They told me that besides supplying the family, they made a considerable quantity of goods for sale."

[3] "Colonial Manufactures," in *The South in the Building of the Nation*, V, 312.

The people west of the Alleghany Mountains during the period under discussion were forced by the exigencies of the times and the general inconveniences connected with pioneer life to make in their homes or small communities nearly all the necessities of life. Imports into the country were attended with difficulty, great expense, and risk. The impossibility of getting their raw materials to the Atlantic states from which they had their supply of European goods made the balance of trade continually against them.[1] In 1805 it cost fifty cents to carry a hundred pounds twenty miles.[2] For this reason there was not a single specie of product except ginseng, beeswax, and saltpeter that would justify the expense of land carriage to the eastern market.[3] From the period of the first settlement down to 1803 this region was in almost complete isolation so far as commercial relations were concerned. As long as the Spaniards held the mouth of the Mississippi, it was practically useless for the farmers to cultivate the soil beyond what was needed for their own consumption. But after the purchase of Louisiana, trade conditions became more favorable, when the inhabitants found an unobstructed market for their ginseng, flax, hemp, iron, pork, lard, lumber, furs, cotton, deerskins, and flour down the Mississippi. With the proceeds from the sale of these staples they could buy European goods from the eastern markets. This favorable situation was somewhat upset by the Embargo act and the trade conditions following it. From the passage of this act in 1807 to the close of the War of 1812 these western people had to shift largely for themselves. They were forced to manufacture in their homes sufficient to supply their daily needs or set up manufactures in small villages. The latter was done on a considerable scale in Cincinnati, Lexington, Louisville, Nashville, and Pittsburgh.[4]

Until there were set up in these local communities beyond the mountains, gristmills, sawmills, hat factories, fulling-mills,

[1] Ellicott, *Journal*, p. 24.

[2] Lippincott, "Pioneer Industry," *Jour. Pol. Econ.*, XVIII, 270.

[3] Reynolds, *My Own Times*, p. 13.

[4] For an account of these manufactures in Lexington in 1806 see Cuming, *Tour of the West*, in Thwaites, *Early Western Travels*, IV, 185 ff.; see also Melish, *op. cit.*, pp. 315, 361, 403.

distilleries, breweries, blacksmith-shops, wagon-shops, shoeshops, etc., the pioneer farm was a little world of its own. There was nothing in daily use except salt, lead, and powder that was not made from the products of the farm. The food, clothing, furniture, and agricultural implements were the products of this independent household. The farmer was his own cabinet-maker, tanner, brewer, distiller, shoemaker, harness-maker, hatter, tailor, and blacksmith. His tools were simple and often rude. At first he had only the axe and the auger. Later he added the drawing-knife, broad axe, cross-cut saw, and awl and last. With these he made everything he needed on the farm. He stocked his plow, mended or made his wagon, made his ox yokes, harness, shoes, tables, bedsteads, and chairs.[1] His whole life for the first dozen years or so was taken up with providing for himself and his family food, clothing, and shelter. The history of a typical community is chiefly an account of the efforts to provide these necessities. Until trade relations were established with older communities, the household was practically self-supporting. Ways and means had to be thought out and operated on the farm to supply the daily needs.

Of the trinity of pioneer necessities clothing was the most difficult to secure. The duty of transforming the raw materials into suitable wearing apparel and household supplies fell principally upon the women. A pioneer woman's work was never done. The day was not sufficient for her to perform all her duties. She was often compelled to work late into the night. The product of her strenuous labors was much the same in all new communities, for the dress of the American pioneer bore a striking similarity. This dress has been minutely described by one whose knowledge was first-hand, as follows:

> Home-made wool hats were the common wear. Fur-hats were not common and scarcely a boot was ever seen. The covering of the feet in winter was mostly moccasins made of deer-skin, and shoe-packs of tanned leather. Some wore shoes, but not common in very early times. In the summer, the greater portion of the young people, male and female, and many of the old, went barefooted. The substantial and universal outside wear was the blue linsey hunting shirt. . . . . It is made with wide sleeves, open before, with ample size, so as to envelop the body in its folds, almost twice around. Sometimes

[1] Hall, *Romance of Western History*, p. 239.

it has a large cape, which answers well to save the shoulders from the rain. A belt is mostly used, to keep the garment close and neatly around the person, and nevertheless, there is nothing tight in it to hamper the body. It is often fringed, and at times the fringe is composed of red, and other gay colors. The belt frequently is sewed to the hunting-shirt. At times, a belt of leather with a buckle sewed to one end is used. Many pioneers wore the white blanket-coats in winter. . . . . They are made loose, with a cap or cape to turn over the head in extreme cold weather. . . . . The vest was mostly made of striped linsey. The colors were made often with alum, copperas, and madder, boiled with the bark of trees, in such a manner and proportion as the old ladies prescribed. The shirts worn by the Americans were usually home-made of flax and cotton-material. . . . . The flax and cotton were raised at home, and manufactured into shirts. Looms and flax brakes were at that day quite common, and cotton-gins made of wooden rollers. . . . . The pantaloons of the masses were generally made of deer-skins and linsey. Coarse blue cloth was at times made into pantaloons. At that day, the factory-goods did not exist.[1]

An example of dispatch in the growth of raw material and the transforming of the same into clothing is cited by Hildreth from the notes of Judge Barker: "In the spring of 1790, Captain Dana sowed a piece of flax, pulled it early in June, while it was in blossom, water rotted it in a swamp near the river, had it dressed and spun in the family, and wove into substantial cloth by his son William. It was made into shirts and trousers for the boys, and worn to the celebration of the 4th of July in Belpre."[2] Such an example of activity and dispatch shows how quickly the pioneer was able to become master of his environment.

[1] Reynolds, *op. cit.*, pp. 43 f. Reynolds came from Tennessee to the region around Cahokia and Kaskaskia, Illinois, about 1800. He describes things as he himself saw them. Other accounts of the clothing of the time substantiate his description. In speaking of the early conditions of the settlement on the Little Hockhocking River at Belpre, Ohio, Hildreth says: "Whole households from the oldest to the youngest, were clad in dressed deer skins. Some of them possessed great skill in making them soft and pliable, equal to the finest cloth. Before the introduction of sheep, buckskin pantaloons were in general use by all the farmers' boys. The New England settlers, with most of the frontier inhabitants, made cloth of various materials. For the first two or three years, hemp was raised in small quantities, water rotted, and manufactured into cloth by the industrious females of the garrison. Flax was also raised. Nearly every family had their spinning-wheels and looms. With these the girls and young women used to congregate in companies of ten or fifteen in the spacious rooms of the block houses, and cheer each other at their labors, with song and sprightly conversation" (*Pioneer History*, p. 392).

[2] *Pioneer History*, p. 392.

The foregoing description of the clothing of the pioneer is applicable mainly to the first few years of his life on the frontier. Phelan says that by 1800 in some parts of Tennessee calico, chintzes, coarse woolen cloths, and bleached linen had taken the place of the leathern apron and the moccasin among the women. The men were a little slower, yet after a time vests, pants, and shirts, made of deerskin worn next to the person, were discarded, and also the coonskin and other fur caps. The hunting shirt lingered for some time yet, as did the leggings and moccasins. Leather thread for leather garments gave place to cotton and flax thread.[1] When F. A. Michaux went through Kentucky and Tennessee in 1802 in his travels, he noted that in Kentucky the women were exchanging their homemade linen for goods imported from Europe. It was his observation that these linens, though coarse, were of good quality and worn principally by the inferior inhabitants, the others giving a preference to Irish linens, which at that time comprised a considerable share of their commerce.[2] Of Tennessee he said: "The cottons that are manufactured in West Tennessee are exceedingly fine, and superior in quality to those I saw in the course of my travels. In this part as well as in Kentucky, the higher circles wear, in summer time, as much from patriotism as from economy, dresses made of the cottons manufactured in the country. At the same time they are convinced that it is the only means of preserving the little specie that is in the country, and of preventing its going to England."[3] By 1810 the older settlements in these two states and those in Ohio had settled down to a life much like that beyond the mountains whence they had come. Cincinnati, Lexington, and Nashville had developed into thriving trading centers. Manufactured goods were brought into these states from Baltimore and Philadelphia, while most of their raw products found a market down the Mississippi River. Even as early as 1806, when Ashe visited Lexington, Kentucky, he found that the chief business was ordering "immense quantities of goods from Philadelphia and Baltimore, and in bartering the same through the

[1] *History of Tennessee*, p. 180.

[2] *Travels to the West of the Alleghany Mountains*, in Thwaites, *op. cit.*, p. 421.

[3] *Ibid.*, p. 278.

state for produce which was forwarded to Frankfort and Louisville by land, and from thence to New Orleans by water." At this time, according to Ashe's observations, the people in these regions were furnished with an abundant supply of every article found in the first markets of Europe, except fish.[1] Ashe probably saw these settlements in a most favorable time—just before the passage of the Embargo and Non-Intercourse acts, which cut off the supply of European goods. Yet it should be said that on the cutting off of this European supply the towns mentioned above set to manufacturing many of the most needful articles, hence the reversion to the household industries was necessary chiefly in the line of apparel and household textile supplies.

But brief mention need be made of the newly acquired territory of Louisiana. According to Stoddard, at the time of the transfer of this territory to the United States a small quantity of cotton was manufactured along the coast into quilts and cottonades. Most families in the neighborhood of New Orleans and in the settlements, especially at Pointe Coupee, on the Red River, and in the Atacapas and Apalousas, spun and wove such articles of clothing as were necessary for their slaves. The people found on experiment that this sort of manufacturing was of great value, and began pretty generally to train some of their women and girl slaves to spin and weave and some of their men to do blacksmith and carpenter work.[2] In the upper part of what is now Louisiana, according to the same author, "the inhabitants generally cultivated a sufficient quantity of cotton for family purposes, spun and wove it into cloth. They were unable to defray the expense of foreign manufactures; the prices of which in these upper regions were very exorbitant."[3] These foreign manufactures were plentiful in New Orleans at this time. The imports into this city in 1802 consisted of some 202 different items, including everything anyone

[1] *Ibid.*, p. 193, both references.

[2] *Sketches of Louisiana*, p. 304.

[3] *Ibid.*, p. 305. Speaking of conditions in this region at the same date, Martin said: "There were but few domestic manufactures. The Acadians wrought some cotton into quilts and homespun, and in the more remote parts of the province, the poorer kind of people spun and wove the wool mixed with cotton, into coarse cloth" (*History of Louisiana*, p. 317).

could wish either for comfort or for luxury.[1] It was only a lack of the means of exchange for them that forced home manufacturing upon these people. In this they differed from the people on the extreme frontier.

The general condition of household manufactures during the closing days of 1809 is exhibited in a report on the subject, "American Manufactures," sent to the House of Representatives on April 19 of this year by Secretary of the Treasury Gallatin, in compliance with a resolution of this body.[2] The brief time allowed for compiling such a report prevented an exhaustive investigation, yet from certain sections of the country considerable data were secured by the Secretary. For example, the report from New Hampshire said that in almost every town (of six miles square or a district containing one or more towns) having a population of two hundred or three hundred families, there was a fulling-mill and a carding machine. Every farmer's house was provided with one or more wheels, according to the number of women. Every other house had a loom for weaving linen, cotton, and coarse woolen cloths. Manufactures of this kind amounted on the average in each family to from 100 to 600 yards a year. Considerable quantities of coarse flaxen cloth worth from fifteen to twenty cents a yard, thus manufactured in families, were sold to traders in villages or in towns and sent to markets in the southern states.[3] Similar returns came from other sections of the country. It was reported that in Delaware 150,000 pounds of wool were annually spun and woven in private families. Large exportations of linen from the western counties of Pennsylvania, and some from Kentucky and from several places in the eastern and middle states were annually made. Eighty thousand yards were brought for sale in 1809 to Pittsburgh alone. The number of looms in Pittsburgh increased from 17 in 1807 to 44 in 1810. In the lower counties of Virginia, North Carolina, generally, and the upper counties of South Carolina and Georgia, almost all the summer clothing for every description of persons was of household manufacture; and almost all the

[1] For an itemized list with quantity for each, see Martin, *op. cit.*, p. 311.

[2] For the text of the report, see *American State Papers*, "Finance," II, 426 ff.

[3] *American State Papers*, "Finance," II, 435.

slaves were clothed in entirely the same manner. The scarcity of wool prevented an adequate supply from the same source for winter clothing. The number of stores for the sale of foreign goods in Mathews County, Virginia, decreased from 15 to 1 between 1802 and 1810. In North Carolina, at a general militia review, out of 1,500 persons present there were less than 40 who were not entirely clothed in homespun.[1]

Generalizing on the basis of the foregoing and similar facts, Gallatin spoke as follows:

> By far the greater part of goods made of cotton, flax, or wool, are manufactured in the private families, mostly for their own use, and partly for sale. They consist principally of coarse cloth, flannel, cotton stuffs, and stripes of every description, linen and mixtures of wool with flax and cotton. It is probable that about two-thirds of the clothing, including hosiery, and of the house and table linen worn and used by the inhabitants of the United States, who do not reside in cities, is the product of family manufacture.[2]

The results of the census of manufactures taken in the fall of 1810 revealed the truth of this generalization. These results are analyzed in chap. v.

[1] *Ibid.*, p. 435. [2] *Ibid.*, p. 427

A CO-OPERATIVE STUDY OF READING IN ELEVEN CITIES OF NORTHERN ILLINOIS

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A co-operative study of reading was organized during the month of September by the committee in charge of the grade-teacher's section of the Illinois State Teachers Association (Northeastern Section), which met at Elgin, Illinois, November 3 and 4. The purpose of this study was to secure a body of facts in regard to the achievement of boys and girls in reading in a number of schools represented in the Association. The superintendents and teachers of Aurora, Barrington, Berwyn, Cicero, Crystal Lake, Harvey, Hinsdale, Joliet, River Forest, Sycamore, and Winnetka co-operated. All of these cities are located within a radius of fifty miles of Chicago. The College of Education of the University of Chicago organized the details of this study, carried on a number of conferences with representatives of the various schools, sent out the tests, scored the results, and returned the material together with detailed reports to the respective schools. The results of the study were presented by the writer at two sectional conferences of grade teachers at the Elgin meeting.

In organizing this investigation the distinction between oral reading and silent reading was recognized as one of first importance. Justification for this distinction will come out more fully in later paragraphs. For the purposes of introduction it is sufficient to remark that the importance of silent reading is not recognized as fully as it should be. In the primary grades of the elementary school special emphasis has usually been given to oral reading. This type of reading proves to be appropriate and economical during that period in which the pupil is mastering the fundamental steps in reading. During the intermediate and upper grades the pupil is frequently called upon to read orally in con-

nection with many class exercises. On the other hand, the pupil soon learns to use reading as a means of securing ideas for himself, and he substitutes silent study for oral reproduction. During the larger part of his school life the progress of a pupil depends upon his ability to master the thought of the printed page during periods of silent study. Furthermore, under most ordinary situations of life, one reads silently for the purpose of gathering ideas and not for the purpose of oral exhibition. With this recognition of the very great importance of silent reading it is quite clear that the quality of instruction in reading must be determined upon the basis of achievement both in oral reading and in silent reading.

The materials used in this study of reading were the standardized oral-reading paragraphs and the silent-reading tests which have been used in connection with the surveys in Cleveland, Grand Rapids, and St. Louis, as well as in a large number of investigations carried on in other cities. These tests have been described in various connections to the readers of the *Elementary School Journal*.[1] A double advantage arose from the use of material which had been carefully rated and used in previous investigations. In the first place, the reading selections were standardized, that is, their relative difficulty was known. In the second place, the earlier studies yielded results which could be used in making productive comparisons.

The standardized oral-reading paragraphs consist of a series of twelve paragraphs arranged in the order of increasing difficulty. The tests were given to the pupils individually by a principal or by a teacher who had been previously trained for the work. As a pupil read the teacher recorded the time required to read each paragraph together with the number of errors which were made of the following types:

a) Gross mispronunciations, which include such errors in pronunciation as indicate clearly that the word is too difficult for the pupil to pronounce.

[1] "Standard Reading Tests," William S. Gray, February, 1916; "A Descriptive List of Standard Tests," William S. Gray, September, 1916; "A Study of the Amount of Emphasis Given to Various Phases of Reading Instruction in Two Cities," William S. Gray, November, 1916.

b) Minor mispronunciations, which include the pronunciation of a portion of a word, wrong accent, wrong syllabification, omission of syllables, etc.

c) Omission of words.

d) Insertion of words.

e) Repetition of words or groups of words.

f) Substitution of one word or group of words for another.

A pupil continued to read until he had made seven or more errors in each of two paragraphs. By means of a system of scoring based on the time required to read and on the number of errors which were made it was possible to represent the achievement of a pupil or a class in numerical terms.

No records were made in this investigation of the quality of oral reading for two reasons: In the first place, previous investigations have shown that it is very difficult to define the various elements which make up quality of oral reading upon a basis which is acceptable to a large number of teachers; in the second place, it has been found that the scores given to pupils by the methods employed in this study correspond very closely to the teacher's own estimate of the relative quality of the pupil's reading. For illustration, the principals who gave the oral-reading tests in connection with the Grand Rapids survey were asked to make a record of the quality of the reading in terms of *A*, *B*, or *C*. If the reading was very well done, this fact was indicated by placing an *A* before the paragraph. If, on the other hand, the reading was very poorly done from the standpoint of expression, the fact was indicated by placing a *C* before the paragraph. These records of quality showed that the time records and records of errors can be relied on as satisfactory measures of the child's reading ability. In nearly every case a pupil received a quality mark of *A* if the paragraph was read at a normal rate with not more than one or two errors. On the other hand, as the number of errors increased and as the rate of reading decreased the quality mark recorded was *B* or *C*. These results suggest that when pupils read very poorly the reason may usually be sought in the fact that they have been assigned material which presents too many difficulties for them.

The average oral-reading scores for the cities of northern Illinois which were included in this investigation, together with the average oral-reading scores of twenty-three Illinois schools tested in September, 1914, of Grand Rapids, tested in March, 1916, of Cleveland, tested in June, 1915, and of St. Louis, tested in June, 1916, are given in Table I.

TABLE I

AVERAGE ORAL-READING SCORES

Grades	Date	II	III	IV	V	VI	VII	VIII
Northern Illinois	October, 1916	28	42	43	47	47	46	45
Twenty-three Illinois schools	September, 1914	20	28	39	43	45	46	....
Grand Rapids	March, 1916	44	47	49	50	47	48	48
Cleveland	June, 1915	42	46	47	48	49	47	48
St. Louis	June, 1916	47	50	52	51	51	51	51

These facts are represented graphically in Chart I. A word of explanation is necessary in order that the chart may be readily

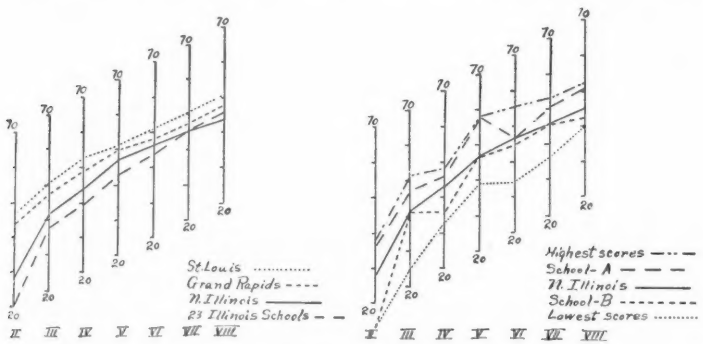

CHART I.—Scores in oral reading

understood. Ability to read a certain paragraph without error means less on the part of a child in the upper grades than on the part of a child in the lower grades. Grades will have to be compared with each other, therefore, by representing different levels of expectation. These different levels are expressed graphically in the chart by the relative positions of the vertical lines. Each

vertical line represents the scale for a grade and begins below at the point where a score of 20 should be recorded and ends above at the point where a score of 70 belongs for that grade. The full-drawn, oblique line represents the average score of the cities of northern Illinois which were included in this investigation.

The left-hand figure in Chart I shows that the schools of northern Illinois are superior in oral-reading achievement, particularly in the lower and intermediate grades, to the twenty-three Illinois schools which were tested in 1914. Furthermore, the chart shows that the achievement of the pupils both in Grand Rapids and in St. Louis is superior to that of the pupils in northern Illinois. When one considers the fact, however, that the tests were given in Grand Rapids five months later in the school year and in Cleveland eight months later than in northern Illinois, it is evident that the schools which participated in the present investigation approach a level of achievement which compares very favorably with that of Grand Rapids and Cleveland. As nearly as can be determined Grand Rapids and Cleveland excel the cities of northern Illinois in oral-reading achievement by an amount which can be represented by the normal growth of a class in from two to three months. We conclude, therefore, that the work in oral reading is very well done on the average in the cities of northern Illinois. Inasmuch as Grand Rapids, St. Louis, and Cleveland secured superior results, the cities of northern Illinois should not feel complacent and self-satisfied in regard to their present attainment.

The right-hand figure in Chart I presents the results for certain typical schools of northern Illinois. The full-drawn, oblique line represents the average curve of progress. The broken line immediately above represents the achievement of School A, an exceptionally good school. The chart shows that throughout the grades this school attains a level of achievement which is above the average for the cities included in the test. The dotted line immediately below the average record represents the achievement of School B, a relatively poor school. As shown in the chart, School B begins at a level below the general average and fails to rise above the average at any point throughout the grades. The dotted line below the record for School B represents the lowest

scores which were made in the test. The broken line above the record for School A represents the highest scores which were made. It will be noted that the range from the highest school to the lowest school in each grade is very wide indeed, and is equivalent in most cases to the normal growth which might be secured in two years. It is evident, therefore, that some third-grade classes are two years in advance of other third-grade classes. A similar statement can be made in regard to the relative achievement of classes in other grades.

This wide variation raises a question concerning the causes for such differences in achievement. In connection with the Cleveland survey it was found that girls did better on the average than boys in oral reading, and that foreign-born children, with the exception of Jewish children, did poorer on the average than American-born children. In connection with the St. Louis survey it was found that the younger children in a class usually did better in oral reading than the older children. Observations carried on in numerous classrooms revealed the fact that the personality of the teacher is a very important factor in achievement in reading. That teacher who is keenly interested in the pupils of her class, who is interesting and enthusiastic in her classroom work, and who understands clearly the problems involved in teaching reading effectively secures much better results, all other things being equal, than the teacher who lacks such knowledge and personal qualities. Numerous other causal factors should doubtless be considered in a thoroughgoing analysis of the causes of wide variation in achievement. For the purpose of this report one other factor will be discussed.

As has already been stated, the oral-reading scores are based on the number of seconds required to read each paragraph, together with the number of errors made. Differences in achievement must, therefore, be attributed to differences in the ability which pupils possess in one or both of these phases of oral-reading ability. Readers of the *Elementary School Journal* will doubtless recall the comparison of the emphasis given to speed and errors in Cleveland and St. Louis made in the November issue. A similar study was made for each of the cities which participated in the investigation herein reported. Certain typical facts are presented in Table II.

The upper section of the table gives the average number of seconds required to read paragraph 1 and the average number of errors made by three *poor* second-grade classes and by three *good* second-grade classes. Of the poor schools, School M made more errors and read more slowly than the average. School N read with fewer errors than the average, but read so slowly that the oral-reading score for the class was below the average. School O, on the other hand, gave sufficient emphasis to rate, but neglected accuracy to such an extent that the oral-reading score was low. An examination

TABLE II

RATE AND ERRORS IN ORAL READING

	PARAGRAPH 1—GRADE II						
	Average	Poor Schools			Good Schools		
		M	N	O	X	Y	Z
Rate	42.2	65.0	64.1	39.1	27.2	32.8	37.9
Errors	1.4	2.0	0.5	2.4	1.1	0.9	1.3

	PARAGRAPH 1—GRADES II, III, AND IV				
	Average	School A	School B	School C	School D
Grade II:					
Rate	42.2	37.9	65.0	39.1	43.4
Errors	1.4	1.3	2.0	2.4	1.7
Grade III:					
Rate	21.9	19.8	23.6	23.9	28.0
Errors	0.9	0.7	1.7	1.8	0.8
Grade IV:					
Rate	18.6	18.0	21.9	16.0	27.0
Errors	0.8	0.6	1.3	0.5	1.5

of the records made by the good schools shows clearly that consistent progress in both rate and accuracy is a prerequisite to a high level of achievement. The schools of northern Illinois vary widely in the amount of emphasis given to these phases of reading achievement. There is need, on the part of many teachers, for a continuous critical study of the specific character of the results which they are securing.

Additional light is thrown on this problem when we follow certain schools through the second, third, and fourth grades. The

average rate and number of errors for Grades II, III, and IV are given in the left-hand column of the lower section of Table II. The records for School A show that second-grade pupils do better both in rate and in accuracy than the average. The same thing may be said of the third and fourth grades. Continuous, consistent progress of this type is very commendable. In School B, on the other hand, the pupils do less well in each grade in both speed and accuracy than the average. A question arises here concerning the general effectiveness of the classroom instruction. School C ranks low in accuracy in the second grade. Apparently this difficulty was realized in the third grade, and considerable progress both in speed and in accuracy resulted. In the fourth grade average results are attained which are above the average. This school represents consistent, continuous growth from grade to grade of a highly desirable type. School D, on the other hand, makes improvement in speed and accuracy in the third grade, but fails to increase its rate in the fourth grade, and makes a record in accuracy which is distinctly below the record made by the third grade. It is evident, if the records for the present second, third, and fourth grades are typical of the results secured from year to year, that there is need for more intelligent instruction and supervision in School D.

In this connection it should be said that objective standards of attainment for each grade should be defined. By means of tests given throughout a school or a city the present level of achievement can be determined. By means of comparisons with results secured elsewhere new goals of attainment can be defined. Each teacher should become familiar with the methods of giving tests. She should utilize them frequently in examining her work to find sources of strength and weakness. Through the co-operation of teachers and supervisors progressive revisions in standards of attainment and methods of procedure should be made. This type of co-operation is necessary because it is only when all the units of a school system work consistently together toward clearly defined ends that the most effective results can be secured. It is therefore recommended that the cities of northern Illinois introduce methods of testing results which will define more clearly the ends to be

attained, which will aid the supervisor in making his services more pointed and effective, and which will enable the teacher to realize more fully the character of the results which she is securing and to outline more intelligently the next steps in instruction.

Before outlining further the constructive suggestions which grow out of this study of oral reading the results secured in the silent-reading study will be presented. The silent-reading tests which were given consisted of three short selections of varying degrees of difficulty. The simplest selection was chosen for pupils of the second and third grades, the second for pupils of the fourth, fifth, and sixth grades, and the most difficult selection for pupils of the seventh and eighth grades. Each selection used in the test was printed in three sections on a card. The middle section contained one hundred words in the case of the easiest selection and two hundred words in the case of the two more difficult selections. This middle section in the case of each selection contained the material upon which the time record was based. The section at the left of the middle section served a double purpose: first, it gave the pupil something to read by way of preparation for the test part of the selection; secondly, it gave the tester an opportunity to determine the moment at which the reader moved his eyes from the bottom of the card to the top of the middle section where the time record was begun. The pupils were tested individually, and a record was secured of the number of seconds required to read the middle section. The average rate of the class was found by determining the average number of seconds required to read one hundred words and then by expressing this result in terms of the average number of words read per second.

The average rates by grades are presented graphically in Chart II for the cities of northern Illinois, for Cleveland, Grand Rapids, and thirteen other cities. Since three selections were used in the silent-reading tests, two readjustments have been necessary in the chart. The points of these readjustments are between the third and fourth grades and between the sixth and seventh grades. In Chart II dotted vertical lines are drawn at each of these points. The numbers at the left of the chart indicate the number of words read per second in the easiest selection. The numbers on the line

between the third and fourth grades indicate the equivalent number of words read per second when the second more difficult passage was used, and the numbers on the line between the sixth and seventh grades indicate the equivalent number of words read per second when the most difficult passage was used. The numbers at the bottom of the chart indicate the various grades which were tested from the second to the eighth inclusive.

In the left-hand figure of Chart II the average rate at which the pupils of the schools of northern Illinois read is represented by the solid continuous line. The rates at which the pupils of Cleveland,

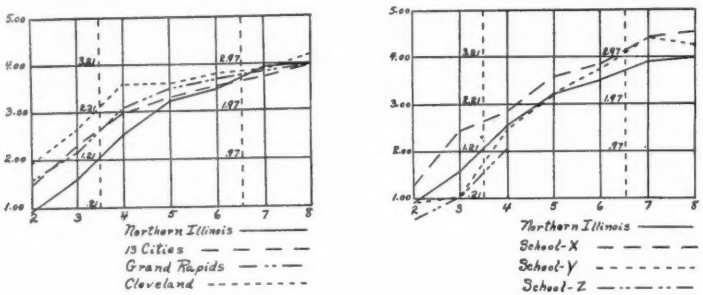

CHART II.—Rate of silent reading

Grand Rapids, and thirteen other cities read are represented by broken lines as described in the key to the chart. The most significant fact for present consideration revealed by the chart is the relatively low rate at which the pupils of northern Illinois read. Even after allowances are made for differences in the time at which the tests were given in the various cities the rate for the cities of northern Illinois remains relatively low. One explanation for the low record of these cities may be found in the general attitude taken by teachers in regard to rate and to quality of silent reading. Throughout the country many teachers assume that slow rate is essential to effective reading, and as a result the character of the instruction given to pupils is determined by this point of view. Careful studies made in regard to the relationship between rate and quality reveal the fact that rapid rate and good quality are more

frequently associated than slow rate and good quality. A second explanation for the low record in rate of silent reading may be found in the fact that in the past teachers have given little attention to this phase of reading instruction, and consequently have never developed methods for securing effective results.

Two additional points should be noted in connection with the left-hand figure of Chart II. The first is that progress in rate of silent reading is made most rapidly during the second, third, fourth, and fifth grades. These results harmonize with the conclusions reached by Courtis and others that a pupil's habits in regard to rate of careful silent reading are very largely established by the end of the sixth grade. It is evident, therefore, that teachers of the third, fourth, and fifth grades must give this problem careful consideration. The second point is that schools attain approximately the same average rate in the upper grades, although they may differ widely in the lower grades. It stands to reason that the school which attains a relatively rapid rate in the third or fourth grade will have a distinct advantage, all other things being equal, over the schools which do not attain an equal rate until the sixth or seventh grade. Ability to master the printed page effectively during periods of silent study is one of the results which instruction should seek consciously and persistently to attain as early as possible.

The right-hand figure in Chart II brings out two facts of importance: The first is that certain schools make a very poor showing in the second and third grades. Schools Y and Z are illustrations. Such schools reduce the general average for the schools of northern Illinois to the low level described in the left-hand figure of Chart II. An examination of the emphasis given by these schools to rate of oral reading shows that slowness is characteristic of the work in reading. Neither in oral nor in silent reading have the pupils attained that facility in the recognition of meanings and symbols which is essential to a high degree of success. Such schools should make a careful study of this phase of reading instruction. The second significant fact is revealed by School X. This school compares favorably with the best schools represented in the left-hand figure of Chart II. All the evidence which can be secured from

a study of the reports submitted by these schools leads us to the conclusion that the low rate on the part of most schools is not due to factors which cannot be overcome. The low records, on the other hand, seem to be the natural result of the kind of instruction which the pupils receive.

At the time that the silent-reading tests were given the ability of the pupils to master the thought of what they had read was tested. This was done by means of a written reproduction of what had been read and by a series of ten questions in regard to specific points in the selection. A pupil's reproduction was scored by checking out all wrong statements, all irrelevant statements, and all repetitions. The words correctly reproduced were then counted. The reproduction score was determined by finding the ratio of the words correctly reproduced to the total number of words read. Each question answered correctly was given a grade of ten points. The reproduction score and the grade received for correctly answered questions were then averaged to secure a "quality" score.

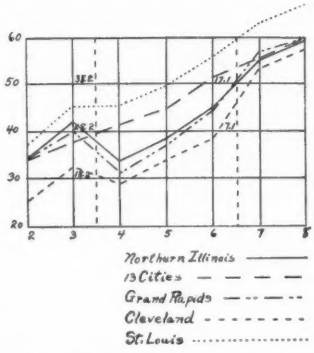

CHART III.—Quality scores in silent reading.

The average quality scores for the cities of northern Illinois, for Cleveland, St. Louis, Grand Rapids, and for thirteen other cities are represented in Chart III. Readjustments appear in this chart similar to those described in connection with Chart II. The break in the curve of progress for some of the cities between the third and fourth grades may be explained as follows: Pupils in the second and third grades tell orally their reproductions, and this is copied by the one giving the test. Pupils in the grades above the third write their own reproductions. It is interesting to note that when the classroom teacher writes the pupils' reproductions the sentences are given in more fluent form than when a disinterested person copies the reproductions. One important

fact is revealed by this chart. The cities of northern Illinois made a higher score than did Grand Rapids and Cleveland, each of which took the test much later in the school year. On the other hand, the cities of northern Illinois made distinctly lower-quality scores than did St. Louis and thirteen other cities. Hence the cities of northern Illinois are reading silently both more slowly and less effectively than many other cities in the country.

Before presenting constructive suggestions which grow out of this study the following summary of the objective results should be made: The cities of northern Illinois are securing effective results in oral reading. As compared with the best city systems in the country these schools are inferior in achievement to an amount not greater than the normal growth during two or three months. Among the schools of northern Illinois, however, different classes in the same grade differ in achievement by an amount equal to the normal progress during two years. In rate and quality of silent reading the schools of northern Illinois secure relatively less effective results. In rate of silent reading these schools are noticeably inferior. Upon the basis of this objective study of the achievement in oral and silent reading the following suggestions are offered:

As stated at the outset of this article, the lower grades form a peculiarly appropriate period in which the fundamentals of oral reading should be mastered. Chart I revealed the fact that progress is very rapid throughout the primary grades. In order to make the associations between symbol, meaning, and pronunciation as effective as possible, quantitative oral reading, particularly during the second and third grades, is desirable. The teachers of Grand Rapids, Michigan, have developed a method of handling the oral-reading problems in the lower grades in a way which secures effective results. This method is described below in the hope that it may prove suggestive to teachers of reading:

> The high average scores attained by the pupils of the second and third grades may be explained by the fact that the pupils of these grades have abundant opportunity to read orally. A large number of pages are read during each recitation. The vigor with which the pupils read and the readiness with which they attack new selections indicate that the fundamental phases of oral reading have been pretty well mastered by the end of the third grade. The

variations in the achievement of the classes of these grades are accompanied by variations in the spirit and methods of the classroom. Fountain School, which ranks very high in oral-reading achievement, has organized its work with great care. The work of the morning is known as literary reading, at which time considerable attention is given to matters of pronunciation, enunciation, expression, meaning, etc. In the afternoon the pupils read primarily for information. This reading is done at sight in connection with some problem in which the class is interested. At the time that the class was visited they were working on the problem of how cotton is grown and harvested. The pupils not only read the story, but contribute interesting facts which they have discovered outside of the classroom, and they bring in interesting objective materials which relate to the problem at hand. At the end of the day the pupils write significant sentences based on the work of the hour, and at the end of the week the pupils write stories based on the readings of the past few days. By these devices the information to be secured is kept foremost in mind. Whenever it is needed the teacher gives effective help on difficult words, but she does this in a quiet way, so that interest and attention are not taken from the main thread of the story. A list is kept of the words upon which help is needed, and at the close of the exercise or in some special drill period these words are emphasized. This type of oral-reading procedure should be introduced more widely in the second and third grades of Grand Rapids.

Inasmuch as our study has shown that habits of oral reading are developed more effectively than habits of silent reading in the schools of northern Illinois, it follows that a portion of the time and effort now given to oral reading should be devoted to silent reading. In order to determine at just what point in the grades this change in emphasis should take place, it is necessary to bear in mind certain important facts. In the first place, by the time a pupil has reached that stage in his development when he can read with ease and facility ordinary third-grade selections his ability to pronounce words exceeds his ability to understand what he reads. At this point additional mastery of word pronunciation is less important than increased mastery of meanings. These meanings are best secured by coming in contact with words and sentences time after time in various connections. The large amount of attention which some teachers give in second- and third-grade classes to quantitative reading with emphasis on the thought side is a long step in the right direction. In the second place, by the time a pupil has reached the point where he can read orally with ease and facility rapid development in habits of silent reading

may take place. The pupil at this period usually becomes interested in the subject-matter which he is reading, and his eyes run along the lines more rapidly than his vocal chords react. At this time silent reading becomes more economical and effective than oral reading as a means of securing thought from the printed page. It is impossible to state definitely when this stage is reached, inasmuch as schools vary most widely in achievement. It may be safely said, however, that instruction in silent reading should receive serious consideration in all grades above the third. The records show that in many schools in northern Illinois pupils who are at the present time beginning work in the third grade have reached that stage in their oral-reading development when emphasis might profitably be shifted to silent reading.

Effective methods for securing increase in rate and quality of silent reading will be emphasized in a forthcoming article in the *Journal*. Hence that phase of the discussion will receive but little attention in this article. Those who are interested in such problems are referred to an article by Superintendent Llewelyn, of Mount Vernon, Indiana, which appeared in the October issue of the *Elementary School Journal*. For those who are in need of immediate help the following suggestions are offered: In endeavoring to secure speed and quality in silent reading the teacher should choose selections which are adapted to a given purpose, or she should adapt her method to the selection in hand. Many selections may be read quickly for the story. Several pages of *Black Beauty* may be read rapidly to find out the number of things that Black Beauty had to grow accustomed to in order to become a well-trained horse. Speed can be encouraged in such an exercise by limiting the amount of time given to the reading. On the other hand, many selections should be read with more care in order to determine what the essential points are in the selection, or to weigh the relative importance of the facts, or to associate the facts of the selection with things which the child already knows. Throughout the intermediate grades selection after selection should be assigned and the pupils trained to read these selections silently under the guidance of specific purposes. Such a lesson cannot be conducted without careful thought and preparation. At fre-

quent intervals careful tests of speed and quality of silent reading should be made in order to determine the most urgent instructional needs of the pupils. The results of these tests should direct the teacher in her choice of future assignments. Those who are interested in practical methods of testing the progress which pupils are making in both oral and silent reading are referrred to an article entitled "Methods of Testing Reading, I," which appeared in the *Elementary School Journal*, January, 1916.

THE USE OF THE RESULTS OF READING TESTS AS BASES FOR PLANNING REMEDIAL WORK

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In connection with courses in educational measurements offered at the Oshkosh State Normal School during the past summer, the writer had an opportunity to use the results of the tests in reading as bases upon which to plan remedial work for defects in reading. The purpose of this paper is to set forth some of the results of this work as measured by the tests themselves.

A word should be said at the outset regarding the pupils upon whom the tests were made. These pupils, like those who usually attend the summer session of public or training schools, were, to a large degree, either conditioned or retarded in their school work. For this reason the low scores attained by many of the pupils are in no sense a measure of the work of the Oshkosh schools as a whole. Also it should be said that, of those who were neither conditioned nor retarded, many were just beginning new grades. Consequently their scores do not necessarily represent the work they would do if tested at the time of year that the standard scores for the different reading tests were derived.

Method.—Very soon after the opening of the summer school, the Kansas silent-reading tests were given to all training-school pupils of Grades III to VIII inclusive. The papers were scored at once and the results were tabulated by grades. Table I shows the results for this test. With these results at hand it was possible roughly to judge the character of the training-school pupils and to plan further work.

As the school term was short, it was necessary to select as early as possible the pupils who were in greatest need of attention. While the Kelly tests indicated roughly who these pupils were, it was desired that further evidence be secured. The next day, therefore, individual testing with the Gray oral-reading scale was

begun, those pupils having the lowest scores in the Kelly tests being tested first. This method rendered unnecessary the testing individually of the entire number of pupils before locating many pupils who were in need of individual instruction. In giving the Gray tests it was possible also to detect, in many instances, several causes for poor reading in individual cases. These individual defects were, in all cases, noted in connection with the records of the pupils.

TABLE I

RESULTS OF THE KELLY TESTS BOTH BEFORE AND AFTER THE DRILL LESSONS

SCORES	GRADES											
	III		IV		V		VI		VII		VIII	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
0 to 0.9	5	2	....	....	....	....	1	0	....	....	....	....
1.0 to 1.9	2	3	1	0	....	....	2	0	....	....	....	....
2.0 to 2.9	2	2	2	3	....	....	1	0	1	0	....	....
3.0 to 3.9	2	0	6	1	2	0	0	0	1	0	....	....
4.0 to 4.9	0	2	2	0	1	0	2	1	0	0	....	....
5.0 to 5.9	1	2	2	3	1	0	1	0	0	0	....	....
6.0 to 6.9	1	0	3	1	1	2	2	0	0	0	1	0
7.0 to 7.9	0	1	3	3	2	0	0	1	0	0	0	0
8.0 to 9.9	1	1	2	3	4	3	3	1	2	0	1	0
10.0 to 12.9	0	1	2	2	2	3	4	5	2	1	4	3
13.0 to 15.9	0	0	0	6	1	5	3	2	5	4	2	3
16.0 to 17.9	0	0	0	1	6	4	2	2	0	0	2	0
18.0 to 19.9	0	0	0	0	1	1	0	4	2	3	3	0
20.0 to 22.9	0	0	0	0	1	2	0	3	0	1	3	2
23.0 to 24.9	0	0	0	0	0	0	0	1	1	1	3	4
25.0 to 29.9	0	0	0	0	0	2	0	1	0	2	2	5
30.0 to 34.9	....	....	....	....	....	....	....	....	....	1	3	5
35.0 to 39.9	....	....	....	....	....	....	....	....	....	1	0	0
40.0 to 44.9	....	....	....	....	....	....	....	....	....	0	0	0
45.0 to 49.9	....	....	....	....	....	....	....	....	....	....	1	1
50.0 to	....	....	....	....	....	....	....	....	....	....	....	2
Total	14	14	23	23	22	22	21	21	14	14	25	25
Medians	2.0	3.5	5.5	8.7	10.0	14.8	9.3	17.0	13.6	19.3	20.0	26.0
Gain	....	1.5	....	3.2	....	4.8	....	7.7	....	5.7	....	6.0
Kansas standards	6.0	....	9.9	....	13.7	....	13.4	....	16.5	....	18.8	....

In the oral reading of a few pupils there were no noticeable defects. Some of these pupils were obviously misplaced by their work with the Kelly tests. Such pupils had failed to do well on

account of such causes as a slight indisposition, a broken pencil point, or failure to understand the nature of the test. An example of a rather bright boy failing to understand the nature of the tests was encountered in the case of a sixth-grade pupil who made a score of zero on the first Kelly test, following this with a score of 47 with the Gray test, and a good score in other succeeding tests. Such individual cases are found in nearly every class tested with the Kelly tests. There were also a few pupils who did well in the Gray oral-reading test, but who did not appear to be intelligent readers. These pupils were then given a third test—the Gray silent-reading test. In one or the other of the tests it is believed that all the poor readers were located and their cases diagnosed with a fair degree of accuracy.

Our diagnosis included several matters which were shown objectively upon the test sheets; other defects, such as a lack of intelligent interpretation, hesitancy, and gross bodily movements, were noted in our additional records. When assignment to a student-teacher was made, these records were carefully gone over, and plans were made for specific treatment of defects. This treatment was continued or modified during the training period according to the apparent needs of the pupils. Individual drill periods of fifteen minutes a day were used regularly for each of the pupils showing marked defects. This drill was continued for a period of from two to three weeks.

At the end of the six-weeks term all pupils in the school were given the Kelly tests for the second time, and all those trained individually, together with a random sampling of the others, were given the Gray oral-reading test for the second time. By means of the results of these second tests it is possible to show in an objective manner some of the results of our individual training.

Results and discussion of special methods.—A discussion of the results of the tests and drill should contain at least a brief treatment of some of the results which do not appear in the scores made by the pupils. For example, some pupils may be found to make low scores on account of extreme care, others on account of extreme carelessness. One fifth-grade girl, much retarded, is an example of extreme carelessness. Each time she worked through both of

the first two pages, but received a score of 6.5 and 8.3, respectively, in the two tests instead of a possible 23.8 in case all trials had been successful. Her particular difficulty was found to be a mispronunciation of small words. Her scores in the Gray oral tests were 32.5 and 31.3, respectively, in spite of the fact that she was given individual drill for three weeks.

Another typical form of defect is shown in the case of a fourth-grade boy who worked to the middle of the second page of the Kelly test in his first trial, only two out of nine paragraphs being correctly worked. This boy underscored all words when asked to underscore only one, as in No. 6, and put a line around all words in the list in No. 9. He seems also to have carried mentally the word "red" from paragraph No. 1 to paragraph No. 7, which has to do with the erasure of certain letters.

Reading which was poor on account of its slowness was found in the case of two girls of the upper grades who seemed to need much more than mere exhortation to work rapidly. Both oral- and silent-reading drills were used in training these girls, with the result that their reading improved in such matters as general expression as well as in the case of factors measured by the tests.

Evidences of errors shown in the records of the tests were suggestive of possible remedies in many cases, for example, that of a boy who showed by his first oral test that much of the trouble lay in his failure to note carefully such words as "had," "ran," "the," "then," and "dog" in the first paragraph of the Gray test, and who read "pass" for "puss," "kind," for "king," and "house" for "room." In most cases the word substituted showed no relation to the meaning of the passage. This type of difficulty was treated by giving drill upon very easy and very interesting reading material.[1] Particular attention to the meaning of the selections read was secured by directing his attention to the story element. In addition to this, drill was given in reading short, easy sentences until they were read correctly several times in succession. This boy's oral-reading score improved from 13.8 to 27.5 largely on account of more accurate reading of the words noted above. The gain as

[1] This material consisted of selections from several readers used in lower grades. Among them were the Free and Treadwell, "Story Hour," Elson, and "Riverside."

shown by the Kelly test was of about the same character. Although the gains shown by this boy's records are probably due partially to indirect factors, as general toning up, yet his improvements from day to day indicate that much benefit came from the specific kind of drill used.

Another common error—that of reading word by word rather than by thought groups, was found in several pupils. One boy who showed this defect to a marked degree was told in oral reading to "look ahead" several words and to be certain before beginning to read each succeeding group that he could read through the single group connectedly. No attempt was made at first to have him read as a group more than the minimum number of words required for each thought group of words. This boy's oral-reading score improved from 23.8 to 33.8 in the two tests; in the Kelly tests he improved from 5.9 to 9.3.

In case of defects already described, as well as of others, a large part of the drill period was spent in reading easy, interesting material. This kind of material was used for two reasons: (1) it offered opportunity for concentration upon errors which the pupil was able to avoid by careful reading, and (2) such material could be selected from the mass of very interesting folk-tales, thus securing a story element which made emphasis upon meaning relatively easy. For such defects as were shown in failure to do well in the Gray silent-reading tests for the upper grades it was found to be well in some cases to drill pupils upon both easy, interesting material and upon harder, abstract material. In such drills certain points touched upon in the selection were sometimes mentioned to the pupil before he began to read; at other times a synopsis was asked for or questions presented after reading. The need for effort upon the part of the pupil was emphasized in such cases.[1]

The gains made and the general interest and toning up shown by several of these pupils are sufficient at least to indicate what might be done in a longer training period for pupils who are averse to the reading of books and who fail to make satisfactory progress as a result of class instruction only. It seems quite possible that

[1] In these drills many of the devices used were similar to those suggested by by N. E. Turner in *Teaching to Read* (American Book Co., 1915).

with some drill, together with a motive for reading, these pupils would lose much of their aversion to books.

Table II shows the records made by all the pupils who took the Gray oral-reading test and the Kelly test at both the beginning and the end of the term. The results of the Gray silent-reading tests are not shown, because lack of time prevented our giving them to many besides those whose defects were not easily found by means of the other tests. This table shows in the first column the Kansas

TABLE II

COMPARATIVE RESULTS OF THOSE DRILLED INDIVIDUALLY AND THOSE NOT SO DRILLED
THE UPPER SECTION GIVES RESULTS OF THE KELLY
TESTS, THE LOWER OF THE GRAY TESTS

	Grade	Standard Scores	Median Test 1	Median Test 2	Av. of Those Helped, Test 1	Av. of Those not Helped, Test 1	Av. of Those Helped, Test 2	Av. of Those not Helped, Test 2	Gain of Those Helped over Gain of Others	Percentage of Gain over Others	Total Pupils Helped	Total Pupils not Helped
Kelly Tests	IV.....	9.9	4.2	7.7	4.7	6.5	8.1	9.7	0.2	5.9	10	13
	V.....	13.7	10.3	14.6	5.2	12.3	8.8	13.0	2.9	80.6	3	19
	VI.....	13.4	8.9	15.4	5.5	9.9	12.7	16.4	0.7	9.7	4	18
	VII.....	16.5	12.8	15.8	3.4	13.7	19.6	24.0	5.9	36.4	2	12
	VIII....	18.8	17.8	25.1	6.9	21.2	15.6	22.2	8.7	89.4	1	23
Gray Tests	IV.....	47.0	31.0	37.5	25.7	34.6	35.1	39.2	4.8	51.1	9	10
	V.....	48.0	37.8	42.5	32.6	45.8	36.2	43.1	6.3	175.0	3	7
	VI.....	49.0	38.3	38.8	32.5	38.2	38.2	39.6	4.3	75.4	4	6
	VII.....	47.0	37.5	41.3	34.7	45.7	40.5	45.0	6.5	112.1	2	5
	VIII....	48.0	41.2	46.9	25.0	44.1	33.8	46.6	6.3	71.6	1	6

standards for the Kelly tests. The second and third columns show the Oshkosh results for the first and second trials, respectively, for the whole group. In the next columns are data which make possible a comparison of growth of the pupils given individual aid with the growth of pupils given only regular school work. The portion of the table dealing with the Gray tests is similarly arranged. In considering the relative growths, it should be stated that between the tests no reference was made to the tests themselves, all drill being upon other material than that contained in any tests. It should also be borne in mind that the pupils who were given individual attention were the poorest readers in the school and were, presumably, not as bright as those who were not selected for the

drill. This is true of all except the two shown in Grade IV as having good scores for the first test; these two were accidentally drilled upon reading for several days instead of upon arithmetic as was intended, the work being continued for several days longer to see what the effect would be. The scores of the pupils of Grade III are omitted because none of those drilled by the students were present for the tests at the end of the term.

Column 9 in each part of the table shows the percentage gain of those drilled individually over those who were not drilled. This was found by dividing the "gain of those helped over the gain of others" by the gain of those helped. While the number of pupils in each of the grades is small, yet the presence of a large relative gain in each grade upon the part of those drilled seems significant. Except in the case of the eighth grade, there is at least a rough parallelism between the gains made in the scores of the different tests. If the small number of pupils will warrant another conclusion, it might be said that the gain in case of the Kelly test indicates that reading rather than general intelligence is measured by the test; a gain in general intelligence upon the part of those drilled would hardly be expected to overcome differences so great as were shown in the first trial.

In order to facilitate comparison of the scores of the pupils who received individual attention with those who did not, Table III is given. The figures are based upon the class averages given in Table II. The first two columns show the differences between the class averages in the two tests; the third and fourth columns were found by dividing these differences by the initial scores.

Table IV shows the results of the tests as to ranges. The pupils referred to as "those helped" are those who were given individual attention. A comparison of the ranges for the first and second tests shows that there was a considerable reduction in the disparity of the work of the pupils of each grade in case of those who were helped individually. Neither the table showing ranges nor Table I showing distributions by grades indicates the extent to which the disparity was reduced; if, however, Tables I and IV are compared, it will be seen that, with the exception of one pupil, all those who were drilled show a marked tendency to gravitate toward the class median.

TABLE III

COMPARATIVE GAINS AND PERCENTAGE GAINS OF THE PUPILS WHO WERE DRILLED AND THOSE WHO WERE NOT DRILLED

	Grade	Gain of Those Helped	Gain of Those Not Helped	Percentage Gain of Those Helped	Percentage Gain of Those Not Helped
Kelly tests...	IV	3.4	3.2	71	49
	V	3.6	0.7	69	6
	VI	7.2	6.5	131	66
	VII	16.2	10.3	476	75
	VIII	9.7	1.0	141	5
Gray tests...	IV	9.4	4.6	37	13
	V	3.6	− 2.7	11	− 6
	VI	5.7	1.4	17	37
	VII	5.8	− 0.7	17	− 2
	VIII	8.8	2.5	35	6

TABLE IV

SHOWING RANGE OF SCORES MADE IN KELLY AND GRAY TESTS

		Grades									
		IV		V		VI		VII		VIII	
		Test 1	Test 2	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2
	Range of all	1.2 to 11.5	2.4 to 16.3	3.6 to 21.6	6.0 to 29.5	0 to 17.1	4.6 to 27.7	2.9 to 24.4	11.9 to 38.4	6.9 to 45.3	11.2 to 50.6
Kelly Tests	Range of those helped	1.2 to 10.0	2.4 to 14.2	3.8 to 6.5	6.8 to 11.3	1.0 to 8.9	8.2 to 16.7	2.9 to 3.9	18.7 to 20.4	6.9	15.6
	Range of those not helped	3.8 to 11.5	2.6 to 16.3	3.6 to 21.6	6.0 to 29.5	4.6 to 17.1	4.6 to 27.7	11.9 to 24.4	11.9 to 38.4	7.7 to 45.3	11.2 to 50.6
Gray Tests	Range of all	3.8 to 46.0	21.8 to 52.5	26.3 to 47.3	31.3 to 49.0	25.0 to 47.0	27.5 to 48.8	30.0 to 63.7	27.3 to 62.0	25.0 to 52.5	33.8 to 52.0
	Range of those helped	3.8 to 45.0	21.8 to 51.5	27.5 to 37.8	31.3 to 38.8	25.0 to 43.8	27.5 to 44.0	32.5 to 36.8	38.8 to 41.3	25.0	33.8
	Range of those not helped	30.0 to 46.0	31.3 to 52.5	26.3 to 47.3	32.5 to 49.0	32.5 to 47.0	31.3 to 48.8	30.0 to 63.7	27.3 to 62.0	37.0 to 52.5	41.2 to 52.0

Table V shows the individual gains made by the pupils of the fourth grade. Some of these should be discussed briefly. The first one, A. K., made little gain as shown by the Kelly tests; at the beginning of the practice period he read very loud and made many

TABLE V

INDIVIDUAL RECORDS FOR PUPILS OF GRADE IV

PUPIL	KELLY TESTS				GRAY ORAL-READING TESTS				GRAY SILENT-READING TESTS	
	Test 1	Test 2	Gain	Percentage of Gain	Test 1	Test 2	Gain	Percentage of Gain	Rate	Quality
A.K.*	1.2	2.4	1.2	100	17.5	27.5	10.0	51.7	.62	4.0
D.M.*	2.6	7.4	4.8	185	31.7	33.8	2.1	6.6	1.3	6.0
C.L.*	2.6	5.4	2.8	107	32.5	35.0	2.5	7.7	1.2	10.0
M.F.*	3.4	11.1	7.7	226	31.7	41.3	9.6	30.3	.8	8.0
P.K.*	3.8	5.9	2.1	55	13.8	21.8	8.0	57.9	.61	22.0
A.S.*	3.8	6.8	3.0	79	3.8	33.8	30.0	789.5	.9	.0
E.K.	3.8	2.6	−1.2	− 32	25.0	.....	.....	.....	1.8	7.0
L.W.	3.8	2.6	−1.2	− 32	25.0	.....	.....	.....	.....	.....
C.M*	3.8	7.7	2.9	76	31.8	37.5	5.7	17.8	1.2	5.0
C.K.	4.0	7.6	3.6	90	38.3	41.8	3.5	9.1	.....	.....
M.P.	4.2	15.2	11.0	275	43.8	45.0	1.2	2.0	.....	.....
G.E.	5.6	3.8	−1.8	− 32	.....	.....	.....	.....	.....	.....
E.P.*	5.9	9.3	3.4	58	23.8	33.8	10.0	41.6	.....	.....
G.M.	6.3	13.6	7.3	116	30.0	51.5	21.5	71.6	.....	.....
M.S.	6.5	5.1	1.4	22	38.0	40.0	2.0	5.2	.....	.....
E.N.	6.8	8.0	1.2	18	36.3	31.3	−6.0	−16.5	.....	.....
E.W.	7.4	9.1	1.7	22	41.3	37.5	−3.8	− 9.2	.....	.....
M.B.	7.7	13.4	5.7	74	22.5	.....	.....	.....	.....	.....
M.D.B.	7.9	13.7	5.8	73	43.7	.....	.....	.....	.....	.....
E.S.	8.9	16.3	7.4	83	30.0	47.5	17.5	58.3	.....	.....
O.S.*	9.6	10.9	1.3	14	41.0	46.5	5.5	13.4	.....	.....
W.F.*	10.0	14.2	4.2	42	45.0	51.5	6.5	14.4	.....	.....
G.S.	11.5	14.6	3.1	27	46.0	52.5	6.5	44.1	.....	.....
Totals..	23	23			22	18			8	8
Medians	5.6	8.0	3.0	73	31.8	40.0	6.5	17.8	1.2	7

*Given individual drill.

gross bodily movements. He was drilled upon easy material orally only. O.S. and W.F. were drilled for five days; their failure to profit may be due to the very short period of drill and to the fact that they were not drilled for any specific difficulty. The pupil making the greatest gain in oral reading, A.S., read in the first test only paragraphs 1 to 4 of the Gray test; she made 9 errors in the first paragraph and 12 in the fourth. In the second test she made

only 2 errors in the first paragraph and 4 in the fourth and was allowed to read through the seventh in which she made 8 errors. Her typical error was that of repeating the first words of each sentence; her gain consists chiefly in the reduction of the number of times that she made such repetitions.

Conclusions.—While the number of cases represented in this study is inadequate for the drawing of positive conclusions, yet the data given tend toward the following:

1. As a means of diagnosis the Kelly test supplemented by the Gray tests should prove very valuable to any superintendent, but especially so to one entering a new system.

2. The accuracy of the diagnosis is such that no poor readers will be found to make good records in all tests, while the specific defects of poor readers can be detected.

3. The keeping of additional records as to specific defects is valuable as indicating or suggesting means for improvement.

4. For many of those who fail to profit by class instruction, carefully planned individual treatment will produce as rapid growth as is produced in case of many apparently brighter pupils by class instruction.

5. Drill should be carried on during the school day by those who are experienced in teaching the subject. (All those who aided in this study had had some experience in teaching young children.)

6. As a measure of economy of school pupils if not of money, unassigned teachers should be available for every superintendent's use in giving individual attention to pupils who are or will soon be in the retarded group.

PROBLEM-STUDY PROCEDURE IN GEOGRAPHY: AFRICA

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Many geography outlines and papers are today advocating the problem method of presenting the subject. The beginner in teaching finds little aid in her desire to carry out this advised process which appeals to her as something altogether new. The problem method has been in vogue for a long time, however, under one name or another and frequently under no name whatsoever. The teacher who puts upon the board the topics, "Position," "Surface," "Climate," "Vegetation," and the like, and follows out the work by a careful investigation of each topic in recitation, using all available means to shed light upon the subjects, is doing true problem work. The teacher, however, who day by day can infuse fresh materials and can approach each country with an unflagging spirit in spite of the monotony of such topics is inspired beyond the normal, for inspiration for most people is a flash in the pan, not a continual flame. The use of the foregoing topics has settled in some schools in one of two sloughs: either answers memorized from the text, or very generalized answers which have little or no value. Position is answered in one of four ways, as north, south, east, or west of somewhere; surface in one of three, as level, hilly, or mountainous; climate as hot, moderate or cold and wet, dry or moderate; vegetation as sparse, moderate, or luxuriant; and so on, an endless round of the same words which, because no very definite picture of the country is presented, are soon lost in a fog. The problem, therefore, will not yield good results unless it is carefully planned, and it has no advantage over any other mode of procedure in this respect. The main reason why the problem outline for class work can be urged with safety lies in the preparation of questions for class use in anticipation

rather than relying on the inspiration of the moment. Frequently the trouble with lessons may be found in the lack of suitably planned questions. The difference has been expressed for years by the phrases "hearing a recitation" and "conducting a lesson"; and teachers are accused of hearing recitations rather than teaching lessons.

The outline of problem-study procedure given here is, then, not printed because the writer believes that everybody should do problem work, but rather in the hope that some who are groping in a thicket may find a path for their journey while others traveling along a safe road may find added pleasures along the way. One series of steps in outlining a lesson plan covering a large area, either a physiographic province or a continent, follows.

First, make a list of items which it is desirable for the pupils to know.

This sounds prosaic but in many cases it is easier said than done. It is simple enough to make a list of place-names, but the elimination of place-names to the minimum requires consideration. Harder still are the statements describing the physical environment and the relationships of these to the life of the country. In fact it is doubtful whether complete statements are necessary, because in the study of detail care must be taken to furnish definite impressions to offset the disadvantages of concise generalizations which are frequently memorized. It is better to leave the pupil with an idea of his own which comes from the interpretation of the various facts than to make him letter-perfect for visitors or for an examination. This list of items for Africa might include:

I. Topography: Mainly plateau, reaching even to the sea.
II. Rainfall: Heavy about the equator; diminishing to desert conditions north and south; at extremities beginning to increase again.
III. Temperature: Warm and humid about the equator (80°); warmer (110°) and dry about deserts; semi-tropical at north and south.
IV. Density of vegetation as a response to climate.
V. Density of vegetation and animal life as a response to these.
VI. Specifically under vegetation: Date palm of desert; rubber tree of Congo.
VII. Specifically under animals: Camel of desert; elephant of Congo and vicinity.

VIII. Density of population with reasons.

IX. Native population in two or three typical centers to bring out:

a) Simple responses in simple stages of civilization.

b) Result of isolation from world-movements.

Types suggested: Arab of desert; forest-dweller of Congo; Kafirs or Zulus of South Africa.

To this it may be well to add the list of place-names which it is desirable for the pupils to know at the end of the study. This plan, while it has some objections, results in concentration of attention by the teacher and prevents the common mistake of overloading a lesson with names. Such a list might include Egypt, Belgian Congo, Union of South Africa, Cape Colony, Transvaal, Atlas Mountains, Sahara, Abyssinian Highlands, Nile, Niger, Congo, Zambesi, Victoria Nyanza, Atlantic, Indian Ocean, Mediterranean Sea, Red Sea, Isthmus of Suez and canal, Madagascar, Cairo, Alexandria, Cape Town, Kimberley, Johannesburg. To insure a thorough knowledge of these twenty-four names would be a gain over much of the aimless teaching where a hundred or more names are imperfectly taught. Furthermore, with a complete mastery of these it is possible, because of some specific interest as in the French, German, and British colonies today, that a few more names may incidentally become a part of the pupil's stock.

Secondly, frame the statement of the problems in such a way that as many of the items in the foregoing list as possible may be concentrated around a single exercise. This will avoid scattering the attention, will aid the memory by the processes of association, and will be a good means of bringing out relationships. The following statements are suggested:

1. Why is the Nile Valley densely populated?
2. What conditions favor the Barbary States more than the rest of North Africa (excepting the Nile basin)?
3. Why do minerals surpass all other exports of South Africa?
4. The tropical lowlands yield little else than raw materials. Why?

Thirdly, each of the above statements must be elaborated, and the first, as an example, is now subdivided into paragraph headings. These should outline a consistent and logical plan of investigation the solving of which will yield an indubitable answer to the question.

1. Why is the Nile Valley densely populated?

A. Fact of problem heading shown: Is the implied statement true?

B. Why should we not have a densely populated section here? This includes a study of the climate of North Africa, the trade-wind influence, the amount of rain, and the great desert.

C. What makes the Nile more favored than other rivers of the north? Its rising under a different wind belt; its tributary supplies; its seasons, and the amount of water which can be stored.

D. The possibilities of agriculture in a desert: The soil; irrigation methods, old and new; the Assuan Dam.

E. The results: What is raised? How much?

F. The labor demanded: The problem of sustenance; the excess of production; shipping; the resulting influence of the Suez Canal.

The fourth step involves the framing of suitable questions or directions under each paragraph heading so that the pupils are led along in their study to a fairly logical conclusion. These questions should use all the available material at hand: the school text; the various maps and tabulated data of the text; the various maps and pictures; stereographs; lantern slides; and whatever forms the equipment of the room that will throw light upon the problem. A suggestive list is offered for the first paragraph only.

A. Fact of problem heading shown: Is the implied statement true?

What is the population of Egypt (tables)? From the political map, ascertain the densities for the Nile Valley; for the rest of Egypt; for Algeria. What does a density such as 125 to 500 per square mile mean? What is the density of population of Rhode Island? What town in Rhode Island has a population density comparable to that of the Nile Valley? What other area of Africa has a density equal to that of the delta? of the valley proper? Conclusions drawn?

The process outlined above has a somewhat pedantic sound and it will probably be found valueless if followed slavishly. However, like all suggestions as to method, it implies modification and inspiration on the part of the teacher in order to be suited to her peculiar temperament and to the work to which conditions restrict her. The problems if undertaken at a sitting or as a new task would be appalling with all the other work to be done, but as a preparation which ought to be a part of her work day by day it does not demand an undue share of time. If, however, no time is ever given in advance of a lesson, as seems to be so frequently the

case, the embarkation on a new method may seem to be a hazardous and unprofitable journey, especially if the old way has not been subjected to criticism. A series of lessons under any method will not be successful if they are approached without preparation, and a vast amount of time is wasted in the geography lesson by aimless and unnecessary questioning. The questions cited under the fourth step should be placed on the board for class study in lieu of topics. In the search for the conclusions the pupil must be taught to use his text and supplementary volumes. The result is that he is really studying and not committing paragraphs and answers to memory. The teacher who plans her questions carefully will without doubt be rewarded by a real gain in teaching power, while her work, which has so far escaped criticism, may now be subject to praise.

THE *PH* GROUP OF WORDS: HOW TO ENLIVEN YOUR WORK IN LANGUAGE

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The teacher of language should do everything in her power to introduce a feeling of interest, even of enjoyment, into her work. As the end of the year approaches, it is profitable to take up certain groups of words for review. Among these groups those with the diphthongs *ph*, *th*, and *ch* are especially important, because such words are usually hard and many of them are puzzling. I shall divide this discussion into sections dealing with the varying lengths of words from one to six syllables, respectively. Teachers can then select the parts most suited to their classes.

The diphthong *ph* is from the Greek letter *phi*, the twenty-first letter of the Greek alphabet, and the English equivalent *ph* is pronounced *f*. Tell your pupils about this Greek origin of the *ph* combination, even draw it on the board (ϕ), and let them expect to find most of these words coming from the Greek language. There is one exception to this rule of pronouncing the *ph* as *f*—the word *Stephen*, which is pronounced as if written *Stĭ'v'n*. In British usage the word *nephew* is pronounced with the soft sound of *v* (*nev'u*); here in America the preference is for the accepted sound of *ph—nef' u*.

In dealing with these separate groups of words, place the list upon the blackboard where all can see it. Next, pronounce each word carefully, and have the class as a whole and as individuals pronounce it. Then define the words, where possible drawing attention to the derivation and illustrating the most common use in a sentence-example. It always pays to introduce into the discussion something interesting about the origin of the word, its application, or just an interesting story that touches it. This helps greatly to deepen the class memory of the word.

I. WORDS OF ONE SYLLABLE

phase (fāz): any one of the different and varying appearances of an object, or views of a subject; as, "The problem has many phases."

phlegm (flĕm): mucus secreted in abnormal quantity; as, "He coughed up a great deal of phlegm."

phlox (flŏks): a flower with red, purple, white, or variegated blossoms; as, "She planted a row of phlox."

phrase (frāz): a short expression; a group of words making sense, but without both subject and predicate; as, "into the garden."

sylph (sĭlf): an imaginary being inhabiting the air; a slender, graceful woman; as, "She danced like a sylph."

Information like that just given—spelling, pronunciation, definition, example—should be in the mind of every teacher. The following sentences might be put on the board as test sentences, for pupils to copy and to supply the omitted words:

1. In the old garden with its beds of ——— the child wandered like a merry ———, chanting ——— of jingles she had learned at school.

2. The doctor did not discuss the various ——— of John's illness, but he did tell him how to get rid of the ——— in his throat.

3. Please discuss the ———, "dancing like a ———," in all its ———, and tell me what kind of ——— it is, what relation it bears to the rest of the sentence, and how it is used.

You may feel inclined to ask me if there are any interesting things about these five little words. *Phase*, *phenomenon*, and *phantom* all come from a Greek word that means "to make to appear." And would you ever dream that *phlegm* and *phlox* are cousins? Yet they are; for both come indirectly from a Greek word that means "to burn." *Phlegm* comes from a word that means "a flame, an inflammation, a morbid clammy humor in the body," which might fester and burn; *phlox*, the dear little flower in its red color, is not unlike its ancestral word *flame*, a flower burning in its color. *Phrase* is from a Greek word that means "to speak." With the following words I shall try to point out some interesting phases to present to the class.

II. WORDS OF TWO SYLLABLES

phalanx (fā′lăngks)
phantom
Pharaoh (fā′rō, *or* fā′rā ō)
pharynx (făr′ĭngks)
pheasant (not *peasant*)
phial (fī′ăl)

Philip (not two *l*'s)
Phoebe (fē′bē)
phonic (fŏn′ĭk)
phonics (fŏn′ĭks)
phosphate
phrasing
Phyllis (two *l*'s)
physics
physique (fē zēk′)
naphtha (năf′thȧ)
nephew (nĕf′ū)

In discussing these words, point out the pitfalls, such as, one *l* in *Philip* and two in *Phyllis;* the *ao* in *Pharaoh;* the *y* in *physics* and *physique;* and the *phth* in *naphtha.* Questions like the following will help to give the words personality:

Which words are names of people? Do you know of any famous *Philips?* (King Philip, the Indian chief; Philip of Macedon.) Which words are names of birds? (*Pheasant* and *Phoebe bird.*) Can you describe them? Which words come from the Greek stem that means *sound* (*phon*)*?* (*Phonic* and *phonics.*) Which words are related to a word discussed with the monosyllables? (*Phantom* and *phenomenon.*) What was a Macedonian *phalynx* like, and which country used it? See the dictionary or encyclopedia. Tell all you can about the *Pharaoh* of Egypt. Look up the Bible stories of Joseph and Moses. Which words are associated with a drug-store? (*Phial* and *phosphate.*) Which word might be suggested by the word *phlegm?* (*Pharynx.*) The Greeks have a stem, *phys-*, which means *nature.* Now designate the words derived from it. (*Physics* and *physique.*) They also have a stem (*phos-*, *photo-*) that means *light.* Find a word that has this idea of light in it. (*Phosphate.*) Phosphate is a form of phosphorus. One of the qualities of this queer substance phosphorus is that if you rub it on something and then put that thing in the dark, it will glow like light, as if on fire. Which word means a cleansing-agent, like gasoline and benzine? (*Naphtha.*) Emphasize the care that must be taken with such inflammable substances. Then make up sentences with blank spaces, to test the words.

III. WORDS OF THREE SYLLABLES

phaeton (fā′ē tŏn)
Philippines
Philistines
Pharisees
pharmacist
pharmacy
Philippi (fĕ-lĭp′-ī)
philippic

phlegmatic	physical
Phoenicia	physician
Phoenicians	physicist
phonetic	graphaphone
phonogram	megaphone
phosphorus	seraphim (Hebrew plural of *seraph*)
photograph	telephone
Phrygians	telephony (te-lef'on-i preferred)

Consider how many of these words can be connected with previous knowledge. *Philippines* are named after Philip II of Spain; *philippic* is named after Philip of Macedon, the orations Demosthenes hurled against Philip when he encroached against Greece being so called. *Philippi*, a city of Macedonia, was also named after Philip. It was the city where Paul preached and organized a church. *Phlegmatic* is the adjective formed from *phlegm*, and means a sluggish condition of the body. *Phonetic*, *phonogram*, *graphophone*, *megaphone*, *telephone*, and *telephony* are of special interest to a class that knows the Greek stems *phon-*, *graph-*, *tele-*. *Phosphorus* and *photograph* both come down from the Greek stem *phos-*, or *photo-*, meaning *light*. *Physician* and *physical* are related to *physics*. Which words are used in the Bible? (*Seraphim* and *Pharisees*.) Look up *phaeton* in the unabridged dictionary or mythology for an interesting story. Look up *Phoenicia*, *Philistia*, and *Phrygia* on a map of Asia Minor and Palestine. By questions or suggestions like these the words are gradually broken into groups. Their meanings are also further emphasized by being interwoven with other knowledge already in possession of the pupils. One of the most important things a teacher can do is to work deliberately for this interlacing, or cross-referencing of information.

IV. WORDS OF FOUR SYLLABLES

pharyngitis	philosopher
phenomenal	philosophic
phenomenon (plural, *phenomena*)	philosophy
philanthropic	photographer
philanthropist	photographic
philanthropy	photography
Philippians	phrenologist
philologist	phrenology
philology	physically
philopena	diphtheria (*dif* preferred to *dip*)

Which eight words can be connected with previous knowledge? Give the name of another disease. Look up *philopena* in the unabridged dictionary to find something interesting about its origin. If you know the meanings of the following Greek stems (*phil-*, love; *anthrop-*, man; *soph-*, wisdom; *phren-*, mind; *-logy*, science of) can you guess the meanings of eight other words given above?

V. WORDS OF FIVE SYLLABLES

Philadelphia	physiologist
phraseology	physiology
physiography	hydrophobia

VI. A WORD OF SIX SYLLABLES

physiological

Which of these words can be attached to previous knowledge? The Greek word *adelphos* means *brother;* now define *Philadelphia*, according to derivation. The word was taken from Ptolemy Philadelphus, king of Egypt in the third century before Christ. The original city of Philadelphia was in Asia Minor. The Greek stems *hydro-* and *phob-* mean *water* and *fear* respectively; find the word coined from them.

Let me emphasize, in closing, that to deal with English words intelligently and entertainingly you do not need a big library. An unabridged dictionary, such as every school in the country should possess, gives all the information. If you take up these words in class discussion, in five-minute impromptu periods as extra review in spelling, pronunciation, and sentence-building, you will find that pupils will begin to be infected by your interest in our great and wonderful English language, and that they will begin to appreciate how its roots sink deeply into all the other great languages of the world.

Elem. School Journal Dec, 1916 v. XVII

PHONICS OR NO PHONICS?[1]

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Many are doubtless endeavoring to decide as to the most efficient method of teaching primary reading, whether through phonetic drills or otherwise.

To those who are interested in determining the value of phonics as related to primary reading, this test may prove helpful.

The experiment was carried on in the first and second grades. In each grade two classes of equal size and equal average ability were formed, and in each one division was given through phonetic drills. All words were developed phonetically. The other classes had no knowledge whatever of phonics. Words were developed by quick-perception and sense-content methods.

During the year the following observations were made in both grades.

The phonic classes so concentrated upon letter sounds that the attention was diverted from the sense of the paragraph to word pronunciation. This brought about lack of interest and fatigue and destroyed the pleasure which the story should yield. The reading was generally less smooth, slower, and the idea confused.

The classes having no phonics were found to enjoy reading for the sake of the study. From the story they got the sense-content. They were less careful and less correct than the phonic classes in regard to word pronunciation. Keeping the sense in mind, they often substituted words from their own vocabulary for difficult or unfamiliar words in the text. They read more swiftly and with more expression. Fatigue was reduced, because curiosity in the story held the interest and caused the attention to be focused upon the outcome of the story.

[1] The report of an experiment carried on under the supervision of Superintendent Charles A. Breck, of Rochester, New Hampshire.

From time to time stories with which the children were unfamiliar were assigned for them to read silently, entirely unassisted. At a signal, books were closed and the pupils were asked to reproduce what they had read. Many of the children of the phonic classes, although very accurate in word pronunciation, were almost helpless when this reproduction was required. Those in the non-phonic classes were, in most cases, able to give clear ideas of the contents.

As a final test in June, the superintendent gave to all classes books which they had never before seen, and stories were chosen which were also new.

No words were developed in preparation for any class. The ability of the classes in attacking new words was found to be about the same, although the class having no phonics read more rapidly, more expressively, but less accurately.

In special cases these observations were made, which have proved valuable: Foreign children, those having impediments of speech, and those who had previously formed bad habits of pronunciation were greatly benefited through the phonetic drills. Certain hesitant, expressionless, and habitually slow readers were greatly helped in overcoming these faults by the rapid work required in the quick-perception and sense-content methods.

BOOKS RECEIVED

AMERICAN BOOK CO., NEW YORK

Essentials of Geography. By ALBERT PERRY BRIGHAM and CHARLES T. MCFARLANE. Cloth. Illustrated. First Book, pp. 266; Second Book, pp. 426.

BECKLEY-CARDY CO., CHICAGO

A Child's Robinson Crusoe. By WILLIAM L. and STELLA H. NIDA. Cloth. Illustrated. Pp. 160. $0.36.

Twelve Plays for Children. By ELIZABETH F. GUPTILL. Paper. Pp. 160. $0.30.

Number Stories. By ALHAMBRA G. DEMING. Cloth. Pp. 205. $0.60.

New School Songs. By THOMAS B. WEAVER. Paper. Pp. 96. $0.16.

A. FLANAGAN CO., CHICAGO

The Brownies and the Goblins. By N. MOORE BANTA and ALPHA BANTA BENSON. Cloth. Illustrated. Pp. 128. $0.35.

The Circus Cotton-Tails. By LAURA ROUNTREE SMITH. Cloth. Illustrated. Pp. 122. $0.35.

The Cut Out Book. By RUTH O. DYER. Paper. Pp. 111. $0.50.

Masterpieces in Art. By WILLIAM C. CASEY. Cloth. Illustrated. Pp. 280. $1.00.

Robinson Crusoe Reader. By JULIA DARROW COWLES. Cloth. Illustrated. Pp. 115. $0.30.

My Pedagogic Creed. By JOHN DEWEY. *The Demands of Sociology upon Pedagogy.* By ALBION W. SMALL. Paper. Pp. 32. $0.15.

GINN & CO., BOSTON

Beacon Introductory Second Reader: Animal Folk Tales. By JAMES K. FASSETT. Cloth. Illustrated. Pp. 160. $0.36.

The King of the Golden River. By JOHN RUSKIN. Cloth. Illustrated. Pp. 71.

How Children Learn to Draw. By WALTER SARGENT and ELIZABETH E. MILLER. Cloth. Illustrated. Pp. 264. $1.00.

HOUGHTON MIFFLIN CO., BOSTON

The Boyhood of a Naturalist. By JOHN MUIR. Being Selected Chapters from *The Story of My Boyhood and Youth.* Cloth. Pp. 123. $0.25.

Fairy Tale Bears. Edited by CLIFTON JOHNSON. Cloth. Illustrated. Pp. 184. $0.40.

The Farmer and His Friends. By EVA MARCH TAPPAN. Cloth. Illustrated. Pp. 106. $0.45.

The Year Out of Doors. By DALLAS LORE SHARP. Cloth. Illustrated. Pp. 106. $0.35.

A Study of Fairy Tales. By LAURA F. KREADY. Cloth. Pp. 313. $1.40.